

A stylized graphic featuring a mountain range with three peaks. The foreground peak is dark green, while the two peaks behind it are a lighter, semi-transparent green. Below the mountains is a blue lake with an irregular, organic shape. The entire graphic is set against a solid light beige background.

# MORROW MOUNTAIN STATE PARK PLAN

## **FOREWORD**

Morrow Mountain State Park, established in 1935, has become one of the State's largest and most accessible park areas. Although detailed plans were developed in the early 1940's, the park has been without a current, working master plan for some time. While the park has continually grown in popularity, many of its facilities are worn or outdated and new demands are being placed on park resources.

This master plan has been prepared to solve these problems, to seek new opportunities for park development and policies for land management. This plan is not a new one; rather, it builds on an original concept of an earlier plan. In this regard, the master plan reflects a commitment to preserve the principles and spirit of the State Park System. In the future, project implementation will be contingent on the availability of funds and the establishment of biennial statewide priorities.

A stylized graphic of a mountain range with three peaks of varying heights and widths, rendered in shades of gray and black. The mountains are positioned behind the title text.

# MORROW MOUNTAIN STATE PARK PLAN

**Prepared By:**

The State of North Carolina  
Department of Natural Resources and  
Community Development  
Division of Parks and Recreation  
Master Planning Unit  
P.O. Box 27687  
Raleigh, NC 27611  
Telephone: (919) 733-5245

February, 1979





## TABLE OF CONTENTS

### FOREWORD

### REGIONAL ANALYSIS

Location, Access, and Population .....	1
History .....	1
Adjacent Land Use .....	4
Regional Recreation .....	7
Geology .....	10

### SITE ANALYSIS

Existing Conditions .....	12
Site Inventory .....	14
Cultural Influences .....	14
Natural Features .....	16
Forest Types and Associated Conditions .....	20

### DEVELOPMENT AND MANAGEMENT RECOMMENDATIONS

Master Plan .....	24
Park Entrance .....	26

Hiking and Bridle Trails .....	28
Main Day Use Area .....	31
Lodge and Museum .....	31
Picnic Area .....	35
Rehabilitation of Morrow Mountain Scenic Area .....	36
Family Vacation Cabins .....	40
Tent and Trailer Camping Area .....	42
Waterfront Area .....	44
The Kron House .....	46
Primitive Camping .....	48
Park Natural Area .....	48
Selected Field Clearing .....	49
Summary of Development Phasing .....	50
Development Program .....	51
Land Acquisition .....	54

BIBLIOGRAPHY .....	56
--------------------	----

### ACKNOWLEDGEMENTS



# Regional Location Map



# REGIONAL ANALYSIS

## Location, Access, and Population

Morrow Mountain State Park lies on the eastern border of Stanly County in the south-central part of North Carolina. The Yadkin and Pee Dee Rivers, different names for the same water-course, form the eastern boundary, and the Rocky River the southern boundary of the county. The Yadkin and Pee Dee Rivers have been dammed a number of times, forming Badin Lake along the upper section and Lake Tillery on the lower. The 4,508 acres of Morrow Mountain State Park abut Lake Tillery for a waterfront length of 5.5 miles.

Albemarle, the county seat of Stanly County, lies eight miles west of the park. Three highways providing primary access to the town are: U. S. 52, running north-south through the county, N. C. 24/27, running east-west, and N. C. 73, running northwest-southeast. These highways are the main traffic routes linking the county to Charlotte (45 miles west of the park), Salisbury (33 miles northwest), and Winston-Salem and Greensboro (55 miles north of the park). The park is approximately 40 miles north of the North Carolina-South Carolina border.

The population within fifty miles of the park was estimated in 1976 to be 986,000, representing 18 percent of the total North Carolina population for that year. The growth rate for this area is expected to increase between 1976 and 1980; the increase for the period 1970-1976 was 5.7 percent, while the rate of increase for the period of 1976-1980 is expected to be 6.8 percent. This growth rate roughly corresponds to that for the entire state, but the population within will increase to approximately 1,053,000 by 1980, (within fifty miles of Morrow Mountain State Park), an increase of just over 67,000 people in four years.

## History

Indians lived in the Uwharrie area for 10,000 years prior to the arrival of white settlers, because these mountains provided the raw materials necessary for making stone tools. The Yadkin and Pee Dee Rivers were major "highways" for prehistoric man,

who first used the narrow channels and floodplains as resting areas and later as camps and villages. Little is known about these early inhabitants, but some of their quarry and workshop sites have been identified.

Documentations by a German doctor in 1670 and by John Lawson in 1701 indicate the presence of Siouan-speaking Saponas, Sauras and Catawba Indians north, south, and west of Stanly County. Lawson logically assumed that Indians in Stanly County were of those same tribes.

The maps of this section of North Carolina drawn between 1701 and 1775 show that little was known of the area or its natural features during that time. All of the maps show discrepancies in locations of towns, rivers, and mountains. By 1808, the maps were more accurate and included the settlements and homesites of many of the English, Welsh, and German families in the area. The 1808 maps show a town of "Tindalesville" on the Stanly County side of the Pee Dee River opposite the mouth of the Uwharrie River, a ferry above the town, and three ferries south of it. After an epidemic of typhoid fever and destruction by a tornado, the town of Tindalesville was abandoned.

Approximately one mile from the site of Tindalesville (later known as Laurensville or Lowder's Ferry), a Scotchman, William MacGregor, settled in America to preach in the Baptist churches. His home, along with an apple orchard and 294 acres of land, was purchased by Dr. Francis J. Kron on November 2, 1839.

Dr. Kron and his family lived here for the remainder of their lives, building their small farm into a sizable tract at one time containing well over 6,000 acres. In addition to practicing medicine, Dr. Kron conducted many horticultural experiments, supervised the operation of the "plantation", and was an active public figure in the county until his death in 1883. Since his wife had died in 1873, ownership of the family holdings passed to his two daughters, Elizabeth and Adele. The sisters began selling their property in 1850 and continued to do so for the remainder of their lives. Elizabeth died in 1896 and Adele in 1910, and both were



buried in the family graveyard behind the home. By the time the estate was settled in 1912, the remaining land had to be sold at public auction to cover the family debts.

The homesite was sold to Horace Armfield, who cultivated the lands around the house. Several people or families lived there as his tenants for some time, but eventually the property was sold to J. M. Morrow, a local landowner and the man for whom Morrow Mountain is named.

In 1884, one year after Dr. Kron's death, a hurricane stripped what is now Morrow Mountain of its trees, giving the mountain a bald appearance, as can be seen in many old photographs. The mountain then became known as "Naked Mountain." Lowder's Landing is named for the Lowder family, whose homesite was destroyed by the same hurricane.

There was so much local interest for a State Park at Morrow Mountain that a committee was formed around 1930 to marshal support for the project. This committee, composed of W. B. Beaver, W. E. Smith, T. R. Wolf, E. E. Swaggs, D. L. Crowell, J. M. Morrow, J. A. Groves, J. H. Morrow, Heath Klutz, and M. M. Palmer, was instrumental in making the park possible. The committee worked on and was largely responsible for the enactment of Chapter 213, Public — Local Laws of 1935, authorizing Stanly County through its Board of Commissioners to issue \$20,000 in bonds for the purchase of land for parks. The land purchased under this program was to be turned over to the State of North Carolina, Department of Conservation and Development, for development and administration.

During the 1930's the federal government, through the National Park Service, had a program to aid in the development and beautification of new parksites by readying the areas for use as a park and then turning them over to the states for maintenance. This program was realized as a good method for providing recreation for the citizens of Stanly County and the State, and the details were soon worked out.





The first step in the process was to have the park under a master plan, or general development plan, mutually agreed upon by both the state and federal agencies involved. During February, 1935, over 1,800 acres of land around and including Morrow Mountain was donated to the State, forming the nucleus of the park and the beginning of the development process.

Almost immediately, the Works Progress Administration and the Civilian Conservation Corps began working in the park, clearing up the area, repairing the existing road system, and beginning work on some of the facilities. The general development plan was officially completed February 25, 1937, but a great deal of work under its general guidelines was already underway. By September 9, 1937, the park ownership was over 3,000 acres, two miles of road had been graded and surfaced, over two additional miles had been graded, the picnic shelter on Morrow Mountain had been completed, and work on the parking lot near the main picnic area had been started.

The Civilian Conservation Corps and the Works Progress Administration completed a great deal of work between 1937 and 1942. The W. P. A. completed construction of the swimming pool and bathhouse in the spring of 1939, and worked on the "Uwharrie Lodge" during the latter half of 1940 and the first half of 1941. Before and during this period the C. C. C. was hard at work constructing many of the other park facilities.

During 1939 and 1940, these workers completed two entire water systems (one for the swimming pool, another for the other park buildings and use areas), the family picnicking area (including a picnic shelter, toilet buildings, septic systems, and picnic tables), a 100-car parking area at the lodge, and the concession building at the swimming pool. By 1942, before the C. C. C. Camp disbanded, two ranger's residences, part of the maintenance and service area (a garage tool house, and shop), a barn, a barracks for summer employees, and enlargement of the parking area on top of Morrow Mountain had been completed.

Morrow Mountain State Park was officially open for public use on August 17, 1939, but the park dedication ceremonies were not held until June 29, 1940. This day-long celebration included a parade in Albemarle, addresses by the Governor and a long list of dignitaries, a water carnival, and a bathing beauty contest.

Between 1945 and 1948, Morrow Mountain State Park was the subject of a large-scale maintenance program; however, in 1947 the park received a \$93,000 appropriation for new development. This appropriation covered construction and paving of park roads and parking areas, enlarging existing picnic areas, and construction of part of a tent and trailer camping area as well as building a boathouse and boat dock, a ranger's residence, workshop, storage building and garage, and six vacation cabins and their associated utilities.

By 1954, the tent and trailer campgrounds were in operation, development of the boathouse area was complete, and the natural history museum had been constructed. Plans and surveys were underway in 1964 for a road to the proposed Kron House restoration as well as plans for two new family camping area washhouses. By 1966, two new 30-site camping areas and bathhouse additions were complete, the road to the Kron House had been paved and a new residence and garage addition constructed.

The local residents have always had a special appreciation of Dr. Kron and his homesite, and they were instrumental in beginning reconstruction and restoration efforts for that homesite. During the early 1960's, considerable effort was spent in research of the history of both the Kron family and the buildings, and in the late 1960's restoration of the site was accomplished. The Kron House was restored and the doctor's office and flower house were reconstructed. Other buildings were also located in the area around the house, as well as some of the original plant materials used by Dr. Kron in some of his horticultural experiments. All of these have been used to portray much of the homestead as it originally appeared.

Additional gifts of land and land acquisition efforts continued between 1935 and 1939. Carolina Power and Light leased the land along Lake Tillery below a certain elevation to the State Park in December of 1941 for 99 years, bringing the size of the park to 4,215 acres. This figure remained the same until 1968, when another tract containing 293 acres was purchased. The current park ownership now totals approximately 4,508 acres.

**Adjacent Land Use**

Lake Tillery forms the entire eastern boundary of the park, creating a park boundary that is easily defined and protected. Furthermore, the Uwharrie National Forest occupies the entire opposite shore so that the visual and vegetative continuity of the lakeshore will likely be maintained. At present, the lakeshore has continuous forest on both sides, except at the Park's boat launch and boathouse. It should be pointed out, however, that while these conditions appear desirable, the State of North Carolina is leasing the entire shoreline from Carolina Power and Light Company. The lease extends to the 285' contour, which includes a band varying



in width, but up to 400' at one point. The lease, executed in 1941, set an agreement to last for "one year and thereafter until terminated by the lessor's giving 60 days written notice to lessee of such termination."

The remainder of the park boundary, on its north, west, and southern sides, is more vulnerable. A few years ago, Alcoa Corporation clearcut a large tract adjacent to the park on its north-west side, and this area was recently declared a Gameland. Park staff is concerned that this boundary of the park may increasingly become a setting for poaching and it is unclear how Alcoa will manage this land in the future. Fortunately, the property boundary is located on the north side of the Fall Mountain ridge, making the cut land less visible from the park interior.

The main resident population and related rural residential and agricultural uses are associated with the "Valley Road," S. R. 1720, which runs parallel to Mountain Creek and the park's western boundary. This is an attractive pastoral landscape where the wooded hillsides of the park enclose one side of the valley. Most of the new construction in the area consists of owner-

occupied single dwellings. There is presently little speculative building for primary or second home development, but the largest of these projects is the Stone Mountain development which occupies the high ridge due south of Morrow Mountain, opposite Mountain Creek. Although road construction has been extensive, only a few homes have been built. An older residential area, consisting of about a dozen permanent homes and a church, is located on a lower ridge between Stony Mountain and the Valley Road.

Morrow Mountain Road, S. R. 1798, is an attractive access to the park and runs mainly through a pasture and rural residential land before entering the park. A country store, located at the intersection of Morrow Mountain Road and the Valley Road, provides goods and supplies for campers and other park users.

This general area will doubtlessly become more attractive for speculative residential development. Inasmuch as the integrity of the park boundary and the quality of Mountain Creek are vulnerable to any sizeable land development project, the impact of pending development should be seriously considered.



## Water Access Areas

- |                       |                     |
|-----------------------|---------------------|
| ① Leeksville          | ⑬ Norwood           |
| ② Milton or Dan River | ⑭ Lilly's Bridge    |
| ③ Cooleemee           | ⑮ Grassy Island     |
| ④ Concord Church      | ⑯ Blewett           |
| ⑤ Dutch Second Cr.    | ⑰ Pee Dee           |
| ⑥ Southmont           | ⑱ Rockingham        |
| ⑦ High Rock           | ⑲ Davidson Creek    |
| ⑧ Flat Creek          | ⑳ Red Hill          |
| ⑨ Beaver Dam          | ㉑ River Bend        |
| ⑩ Lakemont            | ㉒ Copperhead Access |
| ⑪ Stony Mtn.          | ㉓ Sandy Creek       |
| ⑫ Swift Island        | ㉔ Carbondon         |

## Intensive Recreation Sites

- |                           |                     |
|---------------------------|---------------------|
| ① City Lake               | ⑦ City Lake Park    |
| ② Camp Springs            | ⑧ Hagan Stone Park  |
| ③ Blue Grass Park         | ⑨ Dan Nicholas Park |
| ④ Park & Marina           | ⑩ Outrigger Harbor  |
| ⑤ Winston-Lake Park       | ⑪ Rankin Lake Park  |
| ⑥ Greensboro Country Park | ⑫ Carowinds         |
| ⑬ Reynolds Park           |                     |



14 access areas over 70 miles of Yadkin & Pee Dee River Corridors: 1 every 5 miles average.

### Regional Recreation

Morrow Mountain State Park is located within Multi-County Planning Region F, but is also near the border of Regions G and H. The fifty-mile planning radius around the park does not include all of the counties within these three Councils of Government, so, in order to most accurately represent the park's sphere of influences, twelve counties were used to provide the base information. Alphabetically, these counties are: Anson, Cabarrus, Davidson, Davie, Mecklenburg, Montgomery, Moore, Randolph, Richmond, Rowan, Stanly, and Union.

Within this area, the Federal Government operates the Pee Dee National Wildlife Refuge and the Uwharrie National Forest. There are also six State Game Lands in the area which, when added to the area of the Uwharrie National Forest, provide almost 80,000 acres of land for hunting. Within these same counties, there are at least ten historic sites and five intensive recreation sites (such as Carowinds). In addition, there are at least twenty-one water access areas providing boat launching facilities on the Yadkin, Rocky, Pee Dee, Uwharrie, and Deep Rivers.

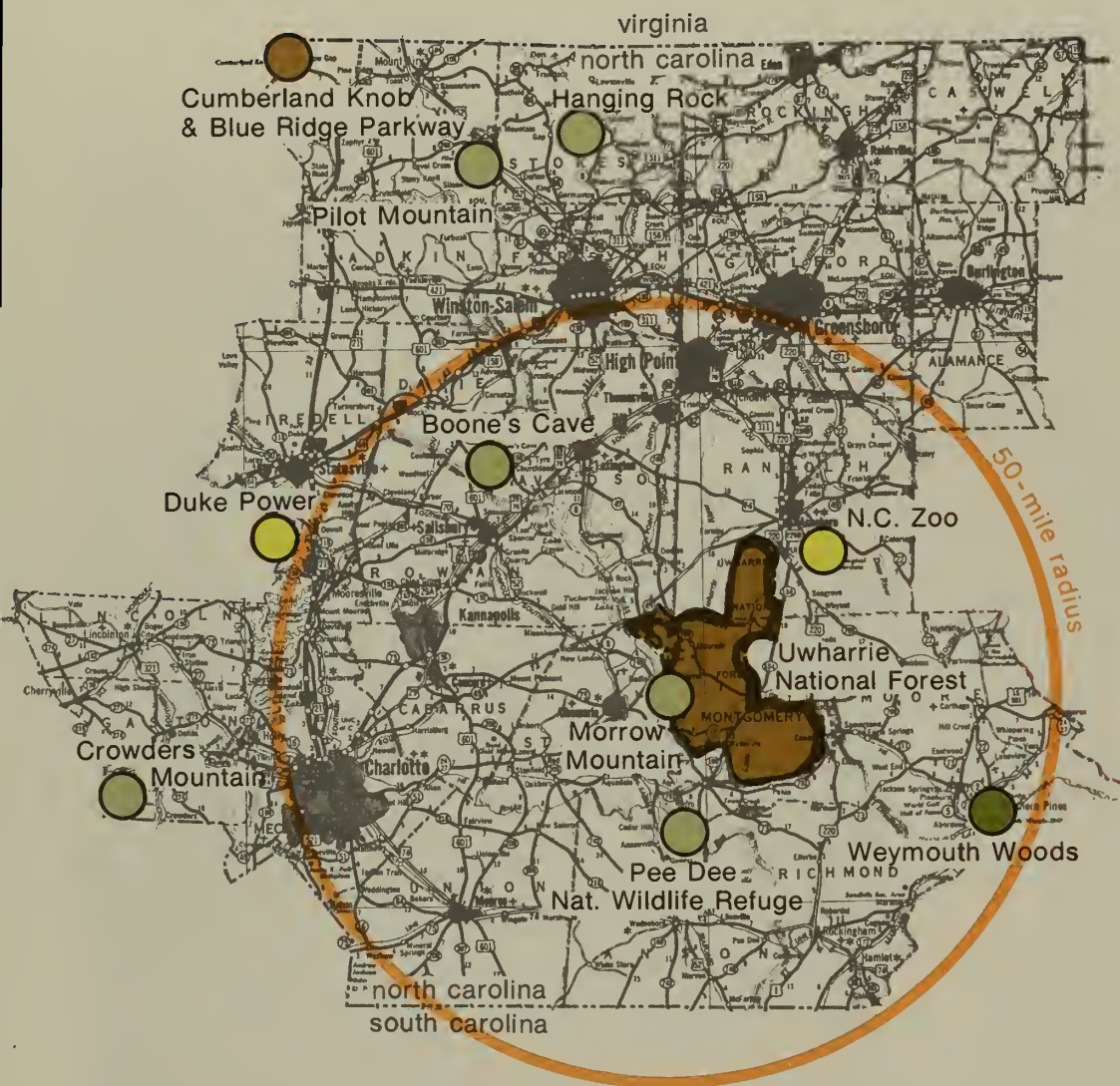
The State-operated recreation areas within 12 market area counties include the Zoological Park and Gardens (27 miles from the park), Boone's Cave State Park (37 miles away), and the Duke Power State Recreation Area (55 miles from the park). As of November, 1977, the Zoological Park and Gardens contained 1,371 acres, Boone's Cave State Park contained 110 acres, Duke Power State Recreation Area included 1,399 acres, and Morrow Mountain State Park enclosed 4,508 acres.

The Statewide Comprehensive Outdoor Recreation Plan (SCORP) provides data for the "market area" for Morrow Mountain State Park. It identifies that portion of each county's population expected to use the various state parks within a 50-mile radius of its geographic center, and then allocates a portion of the park acreage to each of those counties. Totalling the acreages allocated to Morrow Mountain's market area yields

5,888 acres available to serve the 986,600 persons in the same area. These figures show that within the twelve county market area for the park, state parks provide recreation opportunities equal to 5.97 acres per thousand population. The SCORP standard for subclass "Regional/State Park", which includes N. C. State Parks, is 15 acres per thousand population, pointing out the substantial deficit in lands available for public recreation in this area.



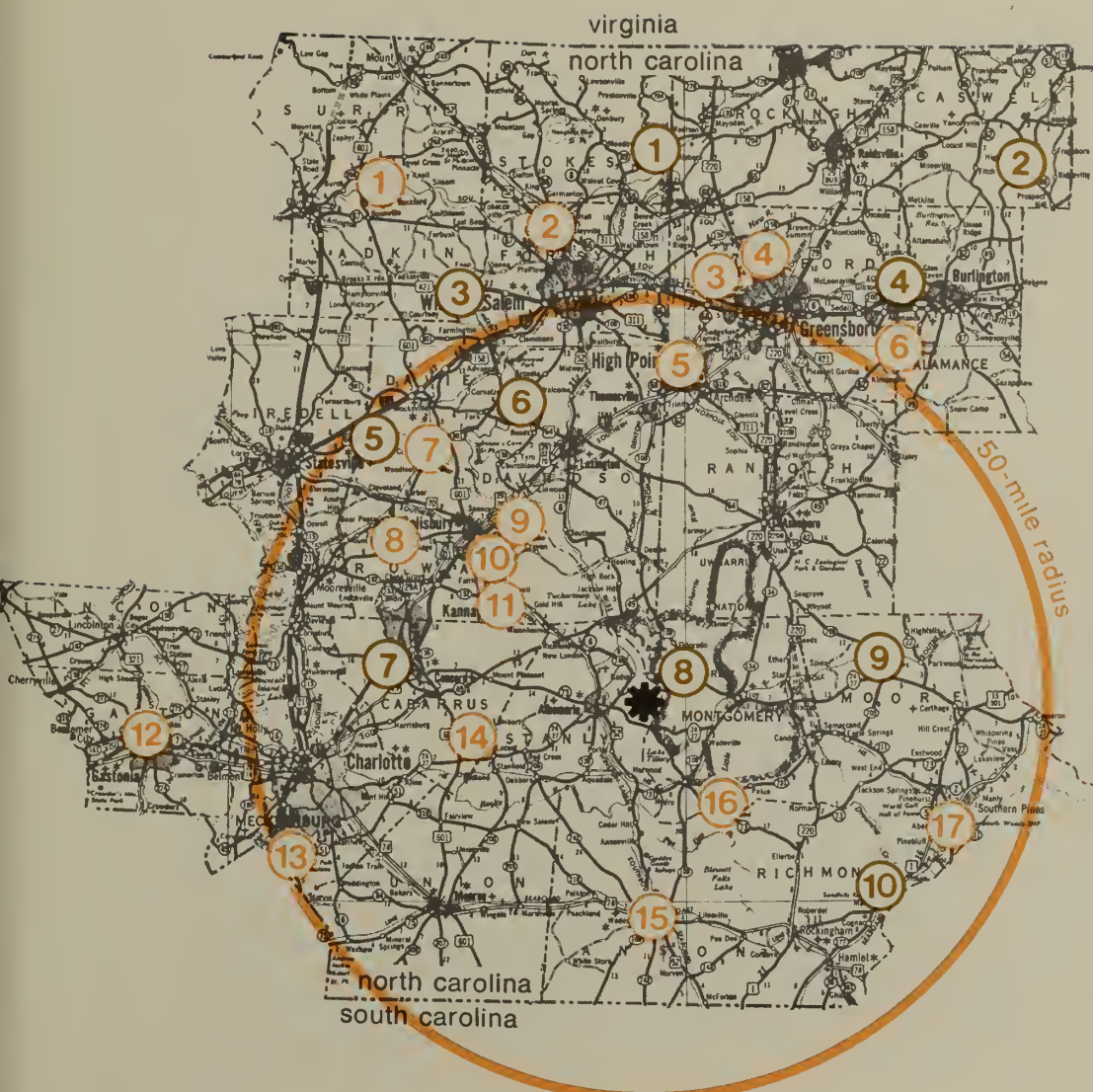




## State & Federal Facilities

- State Recreation Area
- State Parks
- State Natural Areas
- Federal Park & Forest Sites





## Historic Sites

- |   |                                    |    |                         |
|---|------------------------------------|----|-------------------------|
| 1 | Richmond Hills Hist. Park          | 9  | Old Stone House         |
| 2 | Historic Bethabara                 | 10 | Organ Church            |
| 3 | Bailes Old Mill                    | 11 | Lowerstone Church       |
| 4 | Guilford Courthouse Nat. Mil. Park | 12 | Schiele Museum          |
| 5 | Craft Center                       | 13 | Polk Birthplace         |
| 6 | Alamance Battleground              | 14 | Reed Gold Mine          |
| 7 | Third Creek Church                 | 15 | Beggan House            |
| 8 | Thyatira Church                    | 16 | Town Creek Indian Mound |
|   |                                    | 17 | Malcolm Blue House      |

## State Game Lands

- |   |                      |    |                      |
|---|----------------------|----|----------------------|
| 1 | Sauratown Plantation | 6  | Cooleemee Plantation |
| 2 | Caswell              | 7  | River View Acres     |
| 3 | Huntsville Community | 8  | Uwharrie             |
| 4 | Guilford Co. Farms   | 9  | Robbins              |
| 5 | Hall's Farm          | 10 | Sandhills            |

## Geology

Geologists surmise that the Uwharrie Mountains were once merely a flat sea bottom. The tranquillity of this sea was disturbed, however, by powerful forces within the earth that began to work drastic changes on the surface over 500 million years ago. Weak places on the sea floor began to rupture and spew forth molten lava. Just as has been observed in parts of the South Pacific in modern times, these undersea volcanoes quickly form new islands, first piling lavas on the sea floor and then rising above the sea. Geologists call these "foundation rocks" of the Uwharries the Lower Volcanic Sequence. Most of these early rocks are buried deep in the earth.

The next layer of rocks, however, is easily seen along the creeks, in some roadcuts, and at the bottom of the abandoned flagstone quarry located in the park. Called the Volcanic-Sedimentary Sequence, this is the layer containing the familiar

blue slate used in the construction of many buildings in the park. This slate, and the tuffaceous argillite and graywacke shale layers sometimes found above it, are positive proof to the geologists that a great bay or some other body of quiet water existed among the island-building volcanoes. Slate of this type results from volcanic ash forming muddy sediments in quiet water, where it can slowly settle to the bottom, forming bands of light and dark silt and clay materials, which later consolidate under the tremendous pressure of the layer above. The layers under the greatest pressure were metamorphosed from soft shale into the harder and denser slate.

It may have been during the latter part of the slate-forming era, still millions of years before the Age of Dinosaurs, that pressures from inside the earth began to cause a good deal of folding and uplifting to occur. It is not known for certain whether the uplift was fairly sudden or occurred over a long span of time, but the results are obvious — the slate layers are seldom found in

a horizontal position at present, although they were certainly formed that way. Instead they are warped, broken and folded to the extent that the layers in the abandoned quarry are nearly vertical.

It is known that the next layers of rock, the Upper Volcanic Sequence, were formed much later, because the contact between these layers and the layers beneath shows much evidence of erosion. The Mountains were much higher than the level of the sea by this time, because the basalt, tuff and rhyolite thrown out by the volcanoes of this period show no evidence of contact with water. All of the rocks of this upper sequence are volcanic in origin. The western half of the park is covered with a heavy, greenish type of basalt, indicating that quick-cooling flows of lava formed the rocks of this region. Chlorite, a soft mineral, imparts the greenish color.

Rhyolite forms the tops of all the higher hills in the Uwharries. Because of its hardness and density, rhyolite deposits resisted the erosion which cut away so much of the softer volcanic rocks of the area. Geologists call cone-shaped mountains with a hard cap of resistant rock protecting the top "monadnocks." Pilot Mountain and King's Pinnacle are excellent examples of monadnocks in other regions of North Carolina.

Nearly all mountains in the Uwharries are monadnocks. The rhyolite on the mountaintops originally occurred as massive chunks and boulders, but the area's Indians reduced most of these to the black, grey, and white slivers of rock found on these mountains today. Rhyolite is the best material in the southeastern U.S. for making arrowheads and other stone tools. The first evidence of Indians in the area dates back to 8,000 B.C. — a long time by human standards but a mere moment in geological time.



## SITE ANALYSIS

### Existing Conditions

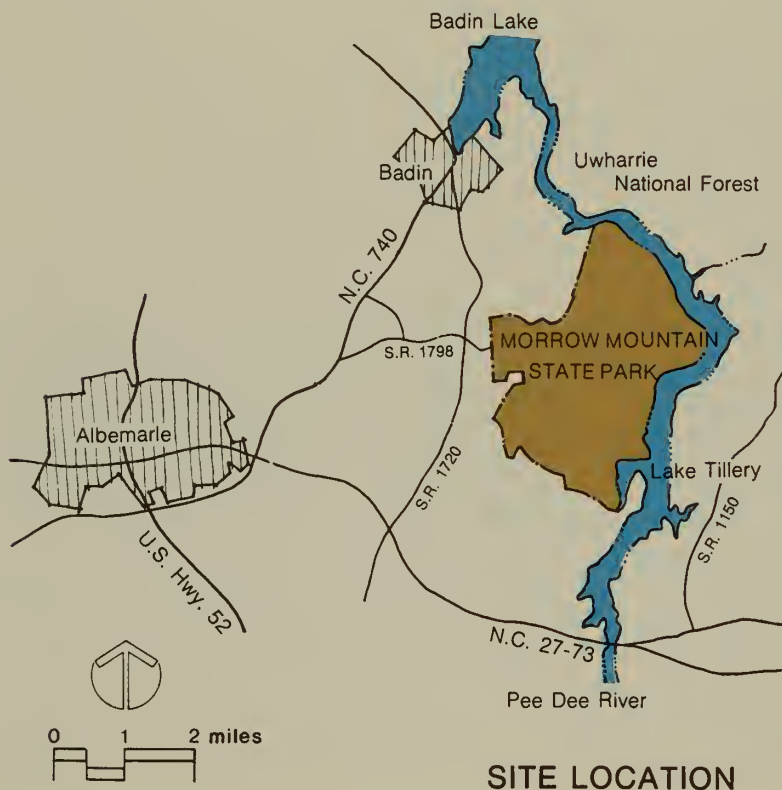
The character of Morrow Mountain State Park has changed gradually over its forty-year history. Facilities have slowly been

added; scars from construction have healed and melted into the landscape; fields cleared for pasture or cultivation are now covered in forest.

The original concept for the park's layout remains intact. Morrow Mountain, physically isolated at the park's inception, acts today much like a "satellite" or even separate park facility. The very steep slopes surrounding the mountain and the desire to maintain an atmosphere of isolation have determined that administrative, day use, and overnight facilities be located in another area, southeast of Hattaway Mountain. Therefore, after entering the park, visitors come to a road junction where they may either turn toward Morrow Mountain or to the general activity area.

The present pattern of use at the park reinforces the concept of separation of the general activity area and the Morrow Mountain scenic area. A considerable portion of visitor use at the scenic area is restricted to that area and does not overflow into other parts of the park. With the exception that the singular use of Morrow Mountain as a scenic resource will continue, its isolation from the general activity area remains a valid concept. Nevertheless, because it is the chief attraction in the park, increasing demands are placed on the scenic area. The desire to improve the views from the mountaintop has been expressed repeatedly. An observation tower has been suggested and additional picnicking has also been proposed. These pressures are directed at a site which is confined, already overused, and is experiencing soil erosion along pedestrian pathways.

In the general activity area, increased park usage and the growth of facilities have obscured the separation of day use and overnight facilities. While the original intent was to locate overnight facilities within walking distance of the lodge and swimming



pool, increased use has reduced privacy and quiet in the family cabin area. Similarly, the area formerly used for overflow camping has been abandoned for overnight use because of its proximity to the main picnic area.

Two picnicking areas, each containing a stone shelter, are provided in the park. The main picnic area lies adjacent to the swimming pool, while the smaller area is located at the top of Morrow Mountain. There is no distinction between the family or group facilities. Both areas are badly worn and in need of extensive site rehabilitation. There is also increasing need for additional picnic facilities, especially for groups.

The swimming pool is the most intensively used facility in the park. The area can accommodate a maximum of 350 people at one time, with an absolute load of about 800 people per day. Despite the large amount of use, the swimming area is the most expensive facility to operate. During peak periods nine employees are required: a bathhouse manager, four lifeguards, two bathhouse operators, and two concession attendants. According to the annual report, operation of the swimming pool costs 38 cents per person over and above user charges, not including major maintenance and depreciation.

In retrospect, many people feel that a swimming lake would have been preferable to a pool. The principles adopted in 1965 governing state parks say that those facilities more appropriate to municipal situations should not be provided in state parks. Despite these reservations, the swimming pool, completed prior to 1940, is a popular, well used facility. It is in good condition, well maintained, in an excellent location, and should continue to serve the park for many years.

The park's administrative offices are contained in the original "Uwharrie Lodge" building, the focus of the general ac-

tivity area. Although the Lodge served as a concession-operated restaurant in the 1950's, it has been virtually abandoned as a public facility. Architecturally, it is unequaled in the State Park System. The main dining room with its large stone fireplace, open ceiling and exposed beams, opens onto a porch and flagstone patio, providing a fine setting for a public gathering. Despite the expense of winterizing and renovating the Lodge, the building should be made suitable for active use on a year-round basis.

The nature museum, a stone building situated at the lower end of the parking lot from the Lodge, contains displays interpreting natural and cultural history. The museum is in an excellent location, but the building itself is too small to accommodate a very extensive interpretive program; in addition, the existing museum display is somewhat outdated and in need of expansion. An interpretive center is well justified at Morrow Mountain due to its diverse landscape, unique geology, and rich cultural history. Development of a comprehensive interpretive program would allow placing emphasis on interior displays as well as on interpretation throughout the park landscape.

The waterfront area, which provides boat launch ramps, a boathouse for rowboat rentals, and trail access, also needs improvements. The launching area, separate from the main parking and boathouse, has no designated parking and becomes congested with cars and trailers on a regular basis. Since the boathouse provides only boat rental services, the main parking area is not full and could handle overflow from the launch area if there were a connecting trail between these points. The large, empty space along the waterfront gives the impression that, aside from rowboating, there is nothing to do — no real attraction. Added facilities and landscaping could give this area a more diverse and hospitable atmosphere.

Soil compaction and erosion are major problems throughout areas of intensive use. This is best exemplified in the "B Loop" of the tent and trailer campground. Most of these campsites must receive immediate attention to correct these problems. This camping loop is the oldest of the three existing loops, and has received more use over a longer period of time than the others. The problems now existing in "B Loop" can be expected in the other loops if corrections are not made quickly. By using the worst camping loop as a demonstration project, the problems beginning to plague the other loops can be examined and solutions designed in enough time to protect the environmental quality and recreation experience of all these areas.

### Site Inventory

#### Cultural Influences







The impact of man's activities on the park landscape over the last century remains visible. Despite a forty-year old policy of natural resource preservation, the location of old dwellings and roads and the boundaries of abandoned fields are still discernible. Although this condition is not unique to Morrow Mountain State Park, it is among the most interesting characteristics of the park area. As one would expect, these elements are found together, clustered in particular areas of the park.

The greatest number of abandoned homesites, cemeteries, roads, and fields is in the northeast portion of the park. The key factor contributing to this condition is the old Lowder's Ferry Road also known as the Salisbury-Fayetteville Road, which provided access to the Pee Dee River at Lowder's Ferry. At least ten homesites have been identified within this area. Also related to this roadway are the sites of the old Stony Hill Church and Lowder's Inn, near the Ferry. The floodplain and adjacent slopes





# LEGEND

-  Abandoned Homesites
-  Old Roadbeds
-  Abandoned Fields (Young Pine Forest)
-  Pine Beetle Infestation
-  Cemeteries
-  Known Archaeological Site



**CULTURAL INFLUENCES**  
Morrow Mountain State Park Plan

Siskiyou County, North Carolina

North Carolina Division of Parks and Recreation



along Mountain Creek are also the sites of numerous old fields and several homesites. The proliferation of these sites indicates at a glance the most fertile, accessible land in the park. Excellent building sites are depicted as well as a documentation of historic land use.

During the period from 1970 to 1975, considerable acreage within the park was damaged due to infestation by the Southern Pine Beetle. According to a N. C. Forest Service estimate, nearly a thousand acres had been attacked and, by late 1974, infestation near the park entrance had killed over 90 percent of the pines in a 700-acre area. At that time, over forty active sites had been located. During the following period, infestation dropped off rapidly. In early 1976, an inspection turned up only 22 active sites. The only active management of pine beetles infestation in the park was to selectively remove infested trees which represented a hazard to park users or facilities. As was predicted, the beetle population fell off after several years of activity, presumably due to the build-up of beetle predators and the effects of inbreeding.

The overall impact of the beetle epidemic has been a sizeable reduction of pine forests, particularly plots of pure pine, with an increase in brushy habitat. The growth of hardwoods, including red maple, sourwood, and American holly has been induced, along with increased grassland. The opening of the forest, coupled with the rotting pine trees, has increased wildlife populations including rabbits, quail, and songbirds. The existing large deer population has been provided more extensive areas of browse. Also, wildflowers have increased substantially in the affected areas. Aside from these benefits, the infestation sites visible from park roads are unattractive and, at best, an interesting part of the interpretive program.

A number of areas within the park have been considerably damaged by ice storms during the winter months. Young pine trees are most affected and the typical pattern is for the greatest damage to occur at topographic breaks such as road cuts or steep hillsides. Especially affected in the past were the top of Morrow Mountain and sites along the fire trails in the southern portion of the park. Considerable manpower has been needed in the past to insure that park roads and fire trails are kept clear.

There are several historic sites of regional significance. The most important of these is a prehistoric Indian site located in the flood plain at the waterfront use area. Following a complete archaeological investigation in 1964, the site was covered with the main parking lot, which exists today. Since the Indians have left considerable evidence of their tool and arrowhead-making, the top of Morrow Mountain is a significant site. In addition to these, there is much evidence of recent history — abandoned homesites and other building places, old roads, and cemeteries.

#### Natural Features

Geologically, one of the most interesting features within the park is rhyolite, the extremely resistant volcanic rock which covers the higher elevations throughout the Uwharrie Mountains. The map of natural features indicates the general extent of this formation in the park.

Early in 1976 a report prepared by the Division's Regional Naturalist included proposals for designating certain portions of the park as "natural areas." The intent was to delineate areas which would never undergo use more intensive than trails or any (sustained-yield) type of management. Among the criteria for selecting natural areas is the desire to include representative

samples of all stable plant communities, uncommon species or unusually large specimens, outstanding geologic formations and active floodplain. This report suggested two areas within the park for consideration. One proposed area covered the southern half of the park including Morrow Mountain and Sugarloaf Mountain. The other area included about one-eighth of the park in the northern portion, based on Fall Mountain. More recent studies by Natural Heritage staff indicates that the Mountain Creek area is especially worthy of designation for natural area status.

Another study prepared by the Regional Naturalist in 1976, describing the natural history of the park, outlined the outstanding natural features found within the park boundary. These points of interest range from interesting geologic formations, to unusual tree specimens, to particularly fine views.

1. **BIG ROCKS** A 35-foot cliff at this point affords a broad view of Lake Tillery and the Uwharrie National Forest. Mosses and lichens of many types are found on the damp rocks. The Big Rocks Trail terminates at this point.
2. **MARSHES** Near the boathouse and extending southward for about 200 yards from the boat ramp is an area that remains wet. Flood Plain Forest trees dominate the forested portions. The area is frequented by muskrats, wood ducks, great blue herons, green herons and other marsh wildlife. Many attractive flowering shrubs are abundant, including rose mallow (*Hibiscus moscheutos*), swamp rose (*Rosa palustris*) and downy arrow-wood (*Viburnum rafinesquianum*).
3. **LARGE BLACK WILLOW** Although most of the black willows (*Salix nigra*) in the park are small, one unusually large specimen grows near Lake Tillery about 150 yards south of the boat ramp. It splits into three trunks about 2 feet from the ground. At 18 inches from the ground the trunk has a girth of 15 feet 5 inches, with a maximum diameter of 5 feet 2 inches and a minimum of 4 feet (elliptical cross-section).
4. **ABANDONED FLAGSTONE QUARRY** A fairly high grade of blue slate (laminated argillite) was quarried at this location by the Civilian Conservation Corps and later construction crews for building materials for the boathouse,

museum and other slate buildings in the park. The last mining was done in 1957. This man-made canyon is now being colonized by vegetation. Frogs, green herons and wood ducks utilize the small pond at the lower end which is fed by a stream that tumbles over the upturned vertical beds of unquarried slate.

This area is a good place for interpreting the early geological events in the region, since the folded beds of slate may be viewed in cross-section from the bottom of the quarry. Dendrites, fossil-like mineral deposits on smooth rock surfaces, may be found in the quarry.

5. **BEECH GROVE** Moist, steep slopes with rich soil in the Piedmont often develop stands of the smooth-barked American beech (*Fagus grandifolia*), the "initial-tree" so popular with young boys with pocket-knives. The most extensive grove of this type in the park lies between the Quarry Trail and the road to the Kron House. This attractive area boasts several beeches over 20 inches in diameter.
6. **BANK OF THE YADKIN** A number of plant species are more common here than at any other known place in the park, including stonecrop (*Sedum ternatum*), a tiny plant with thick succulent leaves, Carolina silverbell (*Halesia carolina*), a small species of tree with white bell-shaped flowers, and cone-flower (*Rudbeckia laciniata*), a tall yellow composite flower more characteristic of high mountain areas farther west.
7. **GIANT BOULDER** The Fall Mountain Trail passes through a yawning crack in a house-sized boulder at this point.
8. **BOULDER FIELD** A cliff-like outcrop juts northward from Fall Mountain toward the dam. Geologically, this is a rhyolite dike formed by the expulsion of heavy lava from a crack in the earth. Prior to the construction of Falls Dam, the dike extended across the Yadkin River, forming the Great Falls of the Yadkin. Plants adapted to rocky, dry sites are found in this area.
9. **LARGE SPANISH CHESTNUT** Between the Kron House and the family graveyard there is a Chestnut tree nearly four feet in diameter. Dr. J. W. Hardin a Botany professor at N. C. State University, Raleigh, indicates that this tree is not an American Chestnut as was once believed. Dr. Kron records in his diary the planting of four Spanish chestnuts (*Castanea sativa*) in his yard.
10. **BILES MOUNTAIN BOULDERS** Although the tops of most mountains in the Uwharries are capped with either a solid mass of rhyolite or fragments left by the Indians' use of this material, giant blue basalt boulders characterize the top of this ridge north of the park gate. Many of these stones are larger than an automobile. Some rhyolite and milky quartz are also present. The orientation of these boulders is most impressive. Many of the stones are standing upright, tombstone-fashion, probably as a result of the vertical displacement



of rock layers during the time the ridge was folded by great pressures in the earth.




11. **HATTAWAY MOUNTAIN** Seen from a distance, it is apparent that Hattaway is more of a ridge than a mountain. This massive ridge is long and broad, with a conspicuous curve in its "spine." From its south-facing side above the swimming pool, one can see several miles down the Pee Dee valley to the south.
12. **DEEP GORGE** The main park road, after passing through the gap between Sugarloaf and Hattaway Mountains, follows the north rim of a gorge about 80 feet deep (in relation to the roadbed) and 1000 feet long. The sides are steep with volcanic rocks exposed along the northslope. Birdfoot violets (*Viola pedata*) and pinxter-flower azalea (*Rhododendron nudiflorum*) are two showy species of wildflowers common along the sunny south-facing banks. Much of the area is dominated by mountain laurel (*Kalmia latifolia*).
13. **SUGARLOAF MOUNTAIN** In the wintertime, when the chestnut oaks do not obscure the panorama with their dense foliage, the view from the summit of Sugarloaf is good from due north towards Badin all the way around to Morrow Mountain on the southeast side, taking in most of the park and a four-mile stretch of the Yadkin and Pee Dee Rivers.
14. **SUGARLOAF CREEK** The second largest creek in the park rises in the gap between Sugarloaf and Hattaway Mountains and flows eastward along the Laurel Trail to join Lake Tillery near the family campground. The creek is very clear-flowing and floods very little even after the heaviest rainstorms.
15. **BIG TULIP POPLARS** Although the tulip poplar (*Liriodendron tulipifera*) attains circumferences of 20 feet or more in the Great Smoky Mountains and other wilderness regions, the two along the Tater Top Trail are impressive. One has a 13-foot girth (at chest height) and the other measures 11 feet. Their respective heights are 87 feet and 73 feet.
16. **LARGE CHESTNUT OAK** The largest chestnut oak that has been found in the park is located in a stream-head between the road to the summit of Morrow Mountain and the return route of the Sugarloaf Trail, just 100 yards east of the road. The tree is about 4 feet in diameter at chest height and is considerably taller (estimated 90 feet) than most chestnut oaks in the park, perhaps because of the protected character of the ravine.
17. **INTERMITTENT POND** Shallow rainwater-fed ponds occur in natural depressions in the underlying rock throughout the park. Although such ponds dry up during severe droughts, they are utilized by toads, frogs, and salamanders for breeding. This is the largest and probably the deepest of these ponds in the park, reaching a depth of about 2 feet and a length of 100 feet during wet seasons.

18. **DEER FIELD** This open expanse, the only sizeable unmowed field in the park, is of value for wildlife food and cover, educational purposes (demonstrating plant succession) and as a scenic vista of a different sort from any other in the park. From the center of the field, one can view all the various old field successional stages against a backdrop of Morrow Mountain on the southeast, Sugarloaf on the east and Hattaway on the north.
19. **OUTCROP OVERLOOKING CREEK** A small mountain northwest of Morrow Mountain, presumably unnamed, juts out into the flood plain of Mountain Creek, forcing a sharp bend in its course. Rhyolite crops out above the creek, forming a steep rocky bluff. Lip ferns (*Cheilanthes* spp.), *Cladonia* lichens and many other species adapted to dry rock ledges are found on this site.
20. **MOUNTAIN CREEK** This fast-flowing stream bounds the park for about two miles along the southwest side. The creek is fairly clean, although some agricultural pollution enters the two feeder streams, one south of Badin and the other reaching almost to the northeastern city limits of Albemarle. For 2/3 of its length along the park boundary the creek is shallow and swift, with a wide flood plain. Lake Tillery has raised the level of the lower 3/4 mile of the creek, covering the flood plain and nullifying the current.
21. **MORROW MOUNTAIN** Indians visited the mountain summit for 10,000 years or more prior to the arrival of white settlers. They gathered the rhyolite, a flint-like rock that makes up the tops of the mountains in the area, for making their tools. Today the summit is covered with millions of slivers of this material, evidence of the Indian's mining.

Morrow Mountain is among the highest peaks in the Uwharrie range, reaching 938 feet above sea level. Its summit offers the finest vistas of the region in several directions.
22. **SALT LICK** A small creek has formed a gully on the side of the road around the base of Morrow Mountain. The gully has unusual hollowed-out places extending three feet or more back into the banks. Deer tracks in the vicinity attest to the popularity of the place. Holes have actually been slowly gouged out of the creek banks with no instrument but the persistent tongues of the many deer who come here for the minerals they need for health. The material they seek is a light gray to yellow, fine-grained clay with the consistency and appearance of powdered gypsum, a mineral used for making plaster. It has no trace of a salty taste, but such a clay might contain calcium, sulfur, aluminum and other trace minerals.
23. **SCENIC PENINSULA** The point of land jutting into Lake Tillery at the mouth of Mountain Creek affords a nice view of these two sizeable bodies of water, one being over 500 yards wide at this point. The land itself is covered with a young pine forest, offering no outstanding or unique features.



# LEGEND

- 10 \* Natural feature (see key on facing page)
-  Rhyolite formation
-  Potential natural area designation
-  Existing open space





### **Forest Types and Associated Conditions**

The constraints on site development are based on natural limitations and vary among five general forest types: mixed forest, chestnut oak forest, pine forest, alluvial forest, and old field community. Canopy and understory species vary through these forest types and are indicative of other physical conditions including microclimate, soils, and slope. These conditions have been differentiated by typical cross-sectional studies through each forest type.

#### **Mixed Forest**

The mixed forest is not a distinct plant community, but a lengthy transition phase between pine forest and hardwood forest. Nevertheless it is the most extensive forest type in the park, occupying a vast majority of the park territory covering intermediate slopes. These areas are usually the best suited for park use where gradients are less than 8 percent.

In areas of high ground, oak and hickory species are the canopy trees found mixed with pine. On the lower slopes associated with the drainageways, mesic species such as red maple and tulip poplar are found in greater abundance than oak and hickory. Soils throughout the mixed forest consist primarily of the Georgeville series, which are characterized by silty-textured surface soil and silty clay subsoil. Generally, the soil is well drained, and, in upper elevations, excessively drained.

Slopes in this cross-section may range from 2 percent to 8 percent on the ridgetops and up to 12 percent on side slopes associated with drainageways. An important pattern repeated throughout the area is the prevalence of abandoned homesites and associated roadbeds. The sites are mostly found along





ridgetops or on knolls. These features may have historical or interpretive interest but, more important, proven building sites with optimum site conditions: well drained soils, good foundation material, and mature canopy trees. Sixteen old homesites were identified from aerial photographs, and a field survey would indicate a number of additional sites.

### Chestnut Oak Forest

The Chestnut Oak Forest, which dominates the upper elevations in the area, is the most unique major habitat in the park. Because the soils are quite shallow in the mountainous areas, coupled with drying winds, quick drainage, and periodic droughts, chestnut oak (*Quercus prinus*) thrives. In sample areas through the park this species was found to compose approximately 70 percent of the canopy within the chestnut oak community. The remainder of the canopy vegetation is composed almost exclusively of other oak species.

This forest community covers the steep rocky slopes along the higher ridges and monadnocks in the park. On the dry south-facing slopes blackjack oak appears in greater abundance with understory trees including sourwood, dogwood, and sparkleberry. The moist north-facing slopes are the habitat of mountain laurel, which grows in thickets in the lower elevations of this community.

Because of prevailing slope and soil conditions, the chestnut oak forest is the most limited natural community in its desirability for use and ability to sustain development. Trail development is possible provided gradients permit or if trails are confined to the ridgetops.



#### Flood Plain or Alluvial

Land area subject to flooding in Morrow Mountain State Park is small, limited to narrow flood plains adjacent to Mountain Creek and a more extensive site at the boat launch on Lake Tillery. In this area the alluvial forest covers nearly 30 acres and includes all existing waterfront facilities.

American beech, tulip poplar, sycamore, and red maple are the principle canopy trees. River birch, black willow, and speckled alder dominate the lakeshore. Drainage is poor throughout the floodplain due to the high water table, and becomes worse closer to the lake edge. Slopes are shallow through this community but may reach as much as 8 percent where the flood plain adjoins upland communities.

The floodplains are most limited in use potential during periods of seasonally high water, when Lake Tillery can become a serious safety hazard. Any additional facilities proposed for the area must be designed to minimize the potential damage from standing water and floods.

#### Pine Forest

Pine forests, found in lowland gently sloping terrain, appear in all stages of succession in the park, and are usually former farmlands which are now occupied by pine stands ranging from twenty to fifty years in age. Generally, the pine forests are pure stands of shortleaf and Virginia pine. Slopes are less than 8 percent and soils are usually well drained and stable. In addition to these conditions, the pine forest monoculture is the least productive wildlife habitat of all forest types in the park.

Although the pine forests are basically well suited for

development purposes, they are rated low in environmental quality. Moisture is retained and, as a result, these areas are uncomfortably humid. Breezes have a limited cooling effect because there is little circulation, particularly in the thick young forests. In most instances, pure pine stands do not contain specimen trees of sufficient size to be of benefit for shade.



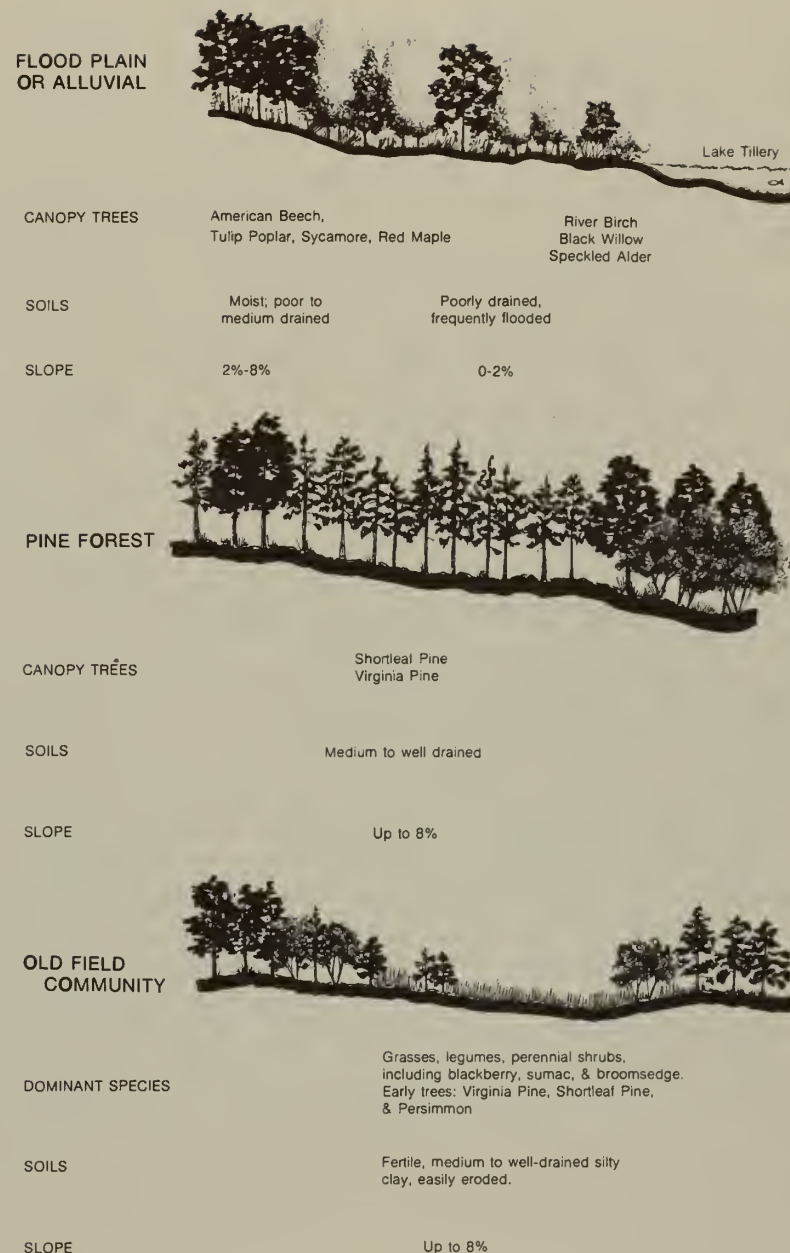
Where development within a pine forest is a consideration extensive clearing may be necessary. At least 40 percent of the trees should be removed for facilities such as camping or picnicking. Mixed forests should be encouraged in future management. As part of the interpretive program or for other demonstration purposes, 100 percent of some young pine stands may be cleared in order to produce active open spaces, wildlife habitat, or more varied landscapes.

#### Old Field Community

As a result of man's mowing, grazing, and cultivating activities, fields remain cleared of vegetation. A field will remain open, with only field layer growth, provided that the field is not abandoned for longer than five years. Although the first plants to colonize in open fields are various annual and biennial weeds, within a few years more substantial grasses, legumes, and perennial shrubs begin to dominate. Within five years, pines and persimmon trees are found growing among the field layer.

Except for lack of shade trees, the old fields are generally well suited for expansion of park facilities. Medium to well drained soils and shallow slopes are characteristic of the old fields. As one would expect, recent homesites and roadbeds will be found near these sites.

The only significant site of this type found within the park boundary is the area known as the Deer Field, in the southeast portion of the park near the staff residences. This site contains about ten acres of field cover, all about the same age. A management plan has not been developed for this site, although it is believed to be frequented by deer and other animals.





# DEVELOPMENT AND MANAGEMENT RECOMMENDATIONS

## MASTER PLAN

In the master plan for Morrow Mountain State Park, greatest priority is given to the renovation or modification of existing park facilities. In this regard, most attention is given to the Lodge/Museum area, Morrow Mountain Scenic Area, and the waterfront area. Additionally, detailed proposals for rehabilitation of part of the tent and trailer camping area have been developed.

Little of the plan deals with establishing new facilities, based on the observation that the original layout has withstood the test of time despite incremental additions. The most extensive proposal for new development is for the establishment of a new and larger family cabin area in the north side of the park, below Fall Mountain.

The basic concept of separating the scenic area from other activity areas should be maintained. The main day use area and Lodge/Museum complex should collectively serve high-intensity use for general recreation, interpretation, and also contain administrative facilities. Overnight facilities should remain on spurs off the main park road, well buffered from the road and other activity areas.

The overall trail system for both hiking and horseback riding is in good condition. Relatively little trail needs reconditioning or realignment. The trails, however, are not as continuous or extensive as they could be. Trail links are especially needed to tie Morrow Mountain to other parts of the park.

Although the main picnic area will be maintained in its present location and undergo rehabilitation in the near future, several new, smaller picnic sites are proposed. The intent is to disperse some use to sites where picnicking is a logical support activity for other facilities, such as the waterfront and interpretive center. A new site has been selected for construction of a large shelter and designation of an organized group area. With the provision of these new picnic areas it is expected that pressure will be reduced at the existing sites and some of the existing sites will be eliminated.

## MASTER PLAN SYMBOLS KEY



INFORMATION  
CENTER



INTERPRETIVE  
FACILITY



RANGER  
RESIDENCE



FAMILY CABINS



PARKING



FAMILY TENT &  
TRAILER  
CAMPING



SCENIC  
OVERLOOK



GROUP CABINS



FAMILY  
PICNICKING



AMPHITHEATER



GROUP  
SHELTER



BOATING



MAINTENANCE  
AREA



LAUNCH RAMP



SWIMMING  
POOL



FAMILY  
PRIMITIVE CAMP



# LEGEND

- Existing facilities
- Proposed development
- Proposed modification of existing facilities





### **Park Entrance**

The approach and entrance area to Morrow Mountain are among the park's nicest features. Several key elements act together to produce a character which should be a pattern for other entrance designs. The entrance area is located a half-mile inside the park boundary so that there is compatibility between its character and adjacent land areas. This approach further enables a park atmosphere to immediately surround the visitor at the entrance.

The main components of the entrance are its formal stone gateway, the narrow (15'-wide) roadway, stone information building, and maintained open space with specimen hardwood and cedar trees. These elements — the approach and formal entrance — create a sense of arrival for the visitor, something that is absent from many park entrances. This important quality sets the stage for the park and instills a greater appreciation for the park as a special resource. Visually, the most important elements of this experience are the stone gateway and hedgerow, a symbolic boundary, set into the open space with the columnar-shaped cedars. These elements define the approach and although they contrast with the rest of the park landscape, they are historically appropriate. Because the entrance area is so well defined, the free-standing park entrance sign is unnecessary and could be incorporated into the stone wall or information building with more effect.

The information building is an attractive structure but its contents are a disappointment. If visitors are going to be encouraged to stop, they should be provided with a good source of information, especially if the facility is not staffed.

There is a fork with a gravel road to the left where the approach road meets the entrance area. This historic roadway was used by the C.C.C., and runs along the north side of Hattaway Mountain, terminating at the Kron House parking area. It is presently used by hikers and horseback riders and is the access route for emptying the trash containers located about 1300 feet beyond the fork. Although the location is convenient to the entrance, the visible road fork is undesirable. As shown on the site plan, a new gravel access road beginning beyond the entrance area will be built to serve the existing trash container location.

As use of the park increases, there will be an increase in traffic volume and related problems. Although the entrance area is well laid out, the entrance road is quite narrow, particularly as it passes through the gate. The area could easily become a bottleneck at times of peak use. Since the scale of the existing elements - road, gateway, open space - is optimum at present, these relationships will not be altered. Instead, a one-way exit lane will be constructed along the edge of the woods on the opposite side of the open area and will tie into the existing gravel roadbed. Furthermore, the stone gateway and hedgerow will be extended and duplicated for the exit lane. This design will complement and reinforce the pattern of the existing entrance and will eliminate a predicted traffic problem in the future.

As a last measure for improving the entrance area, the actual control gate will be moved from its present location at the stone wall approximately 2,000 feet further west to where the road crosses a saddle between two large hills. Relocation of the control gate will eliminate its undesirable proximity to the staff residences.





SITE PLAN FOR PARK ENTRANCE

In summary, the proposals affecting the park entrance area are:

1. Maintain the present layout and scale of the entrance road, stone gateway, and open space. Improve the contents of the information building.
2. Relocate the trash container access road and reforest the abandoned stretch of gravel road.
3. Construct an exit lane, maintaining and reinforcing the existing landscape elements, when traffic volume warrants.
4. Relocate the park control gate.

### **Hiking and Bridle Trails**

Beyond the park entrance and staff residence area, at the entrance to the Deer Field, contact stations giving detailed information on the hiking and bridle trails will be established. The gravel access road to the Deer Field will join the main park road at two points to form a one-way loop. The remaining section of gravel road connecting to the residence area will be closed to the public. Separate parking areas for bridle trail users and hikers will be provided along the remaining loop, and the bridle and hiking trail system will begin and terminate at these points. Displays

and maps at both parking areas will provide accurate and complete information on the extent and layout of the trails. Toilet facilities will be located between the two parking areas.

In response to considerable interest expressed in horseback-related camping, a camping loop of approximately twenty sites will be established for use by horseback riders who seek more than just a day's trail ride. The existing stables, which are located near the residence area and currently used for storage, will be moved closer to the camping area and restored to use as stables. Tie racks will also be provided. The building will be located between the bridle trail parking area and the proposed camping loop. Further study of these proposals will determine management policies for the stables.

The existing trail system in the park consists of over twenty miles of trail, over eight miles of which are exclusively for hikers. Principle hiking trails include the Fall Mountain, Hattaway Mountain, and Sugarloaf Mountain trails, each of which is a long distance loop trail requiring a minimum of 1/2-day to hike. The balance of hiking trails consists of self-guided or interpretive trails such as the Laurel Trail at the Museum, Quarry Trail at the main picnic area, and Three Rivers Trail near the boathouse. These are each about 1/2-mile in length and intended as secondary activities.



- Existing hiking trail
- Proposed hiking trail
- Restored hiking trail
- Existing bridle trail
- Proposed bridle trail



TRAILS PLAN  
Morrow Mountain State Park Plan  
Stallins County, North Carolina North Carolina Division of Parks and Recreation



Several of the hiking trails need maintenance and proper surface treatment because of soil compaction or erosion. The Laurel Trail and the Quarry Trail are especially in need of renovation. The entire southern section of the Sugarloaf Mountain trail, where it descends the mountain, needs to be reworked. The mountain is very steep and, in many places, the trail has been completely eroded. Although the general location of the trail is satisfactory, its surface needs renovation and a new set of switchbacks. About 800 feet of the Hattaway trail must be eliminated and relocated on more compatible slopes, adding slightly less than 1/2-mile to the existing trail. The very northern portion of the Fall Mountain Trail, where it descends the mountain to the river, must also be reworked. Here again, the trail is much too steep for hiking and must be realigned to maintain reasonable gradients.

The majority of existing trails are for both hiking and horseback use, but are officially designated as bridle trails. Frequently they follow abandoned roadbeds and serve as firebreaks. These trails, which total more than ten miles, are generally in good condition with little need for extensive renovation. However, a 1/2-mile section which circumvents the Kron House parking area and parallels the Kron road to its junction with the main park road

does need repair. The trail descends some steep slopes which are hazardous to both riders and horses in wet weather and can be relocated nearer to the Kron road to avoid the bad sections.

Aside from new trail alignments previously mentioned, or discussed in other sections, the main addition to the hiking trail system is a 2.5-mile link beginning at the Lodge and terminating at the Morrow Mountain Scenic Area. This link would utilize about 1/2-mile of the existing Sugarloaf Mountain Trail and a portion of the Laurel Trail, but otherwise would be new construction. The beginning point and destination of this trail will make it a popular day hike.

Nearly 12.5 miles of new bridle trails will be added to the existing 10-mile network. This additional mileage will enable casual riders to spend an entire day exploring the park, and will result in higher demand for overnight facilities for those riders.

As mentioned earlier, those trails designated as "bridle trails" are also available for use by hikers; those trails designated as "hiking trails" are only for that use. Therefore, when the 23 miles of "bridle trails" are added to the 14 miles of "hiking only" trails, the available mileage for hiking is increased to approximately 37 miles. These figures take into account the 1.9 miles of existing trail to be reworked and the .85 miles to be removed.

## MAIN DAY USE AREA

### Lodge and Museum

Interviews conducted during the planning study, combined with a review of past correspondence, indicate that the conversion of the lodge to an interpretive center is an old and well supported idea. The present museum building is in good condition but is too small and does not have the support facilities to sustain an expanded program. State Parks' naturalists, museum curator, and historian indicate that the park is rich enough in cultural and natural history to warrant an extensive interpretive program.

A study of the lodge building determined that conversion of the building is feasible from a programmatic standpoint. Optimum components of an interpretive building, available space, and spatial relationships were carefully considered and it was found that the lodge building is well adapted, with few spatial modifications, for conversion to an interpretive center complete with administrative offices. Conversion of the old cloakroom into a reception area would provide direct access to restrooms, as well as access to main parts of the building without having to move through other areas. The former tea room is adequate in size and location for use as the main interior display area. The old kitchen, with existing cold storage units and sinks, is well adapted to laboratory use. This room is also accessible through an exterior porch at the side of the building so that employees will have a private entrance.

Most importantly, the main lodge room needs to be actively used, yet the airy quality of the open space should be preserved. This room will be used for multiple purposes, including auditor-

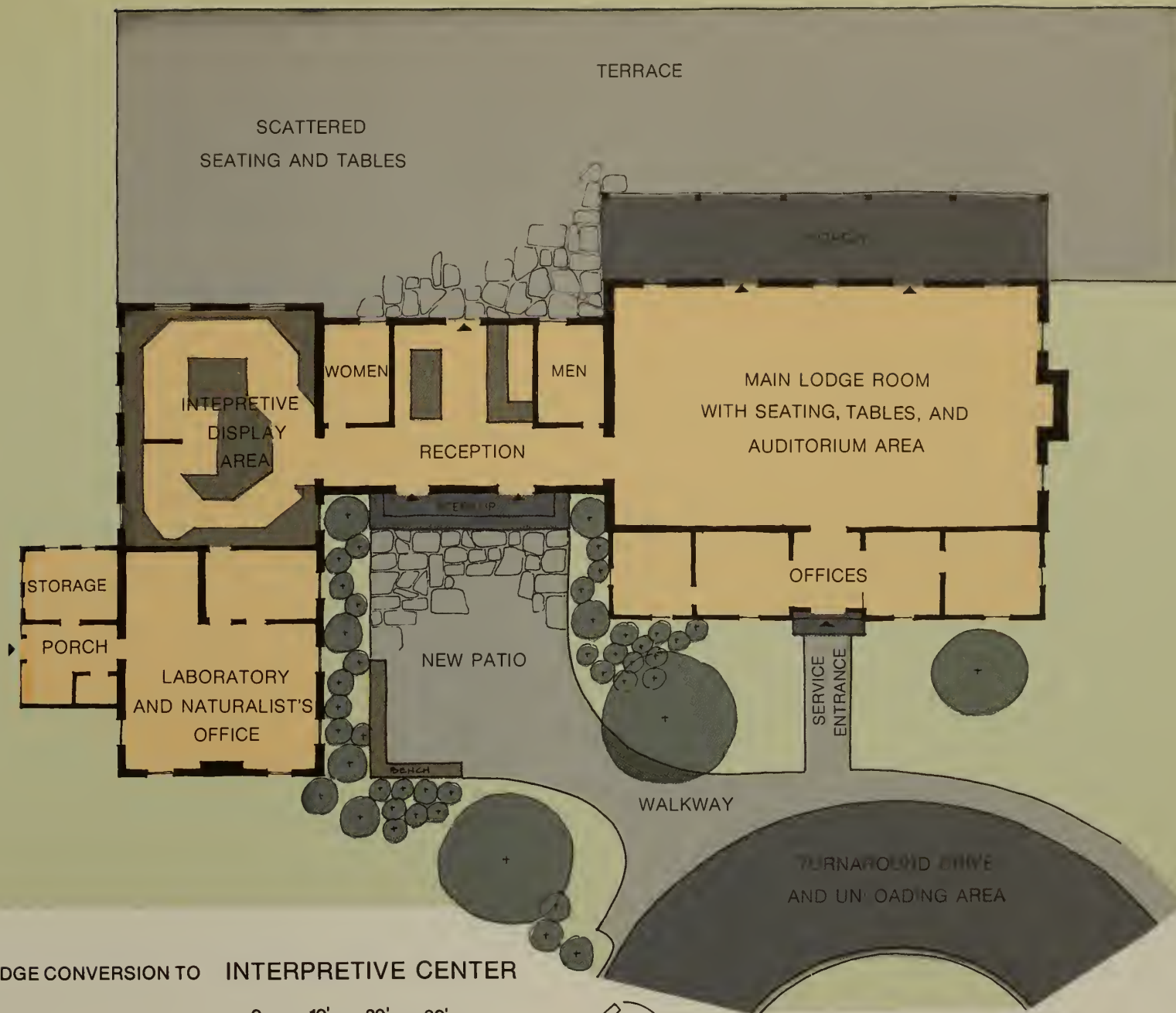
ium/lecture space, lounge area, temporary exhibitions, dances, and other group activities. It is fundamental that the layout and quality of the space remain in its present condition.



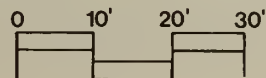




SITE PLAN FOR LODGE AREA



LODGE CONVERSION TO INTERPRETIVE CENTER





The west-facing wall which presently includes the offices will be entirely converted for that purpose so that a total of 1080 sq. ft. administrative space will be provided. The existing front porch will be enclosed providing this elevation with a continuous horizontal siding except for one staff entrance door. A small sign indicating a staff-only entrance would be appropriate at the edge of the walk. The entrance should open into a foyer which provides an air lock for the lodge room and offices on each side.

The new entrance to the interpretive center will be shifted back to the original lodge entrance, and a larger slate patio with a sitting area will be provided at the front.

The large slate terrace at the rear of the building is rarely used. Conversion of the building will make it an appropriate location for exterior displays, demonstrations, and an extension of the lounge area.

The museum building, an attractive structure with a stone facade and clerestory windows, is situated at the edge of the woods at the south end of the parking lot. It is too small for an extensive and encompassing interpretive display, much less for support facilities; nevertheless, its proximity to the lodge building and direct access from the parking lot make it suitable for a secondary, supportive, interpretive function. Therefore, the mu-

seum will be adapted for special exhibits for children and handicapped when the lodge building is opened as the interpretive center.

There is good potential for opening new self-guided interpretive trails in the Lodge/Museum area. Grades in the area are shallow and facilitate use by all ages and handicapped. Two specialized loop trails will be built in the area east of the interpretive center; one trail will enclose a 1/4-mile loop, while the other will extend the total length to 1/2-mile. A comprehensive interpretive program will be developed to explain and make the varied natural features along these trails accessible to handicapped and non-handicapped park users.

The existing trail associated with the museum, the Laurel Trail, loops around the family cabin area. It has been so heavily used that now it is eroded and compacted along its entire length. Because of the heavy use patterns on the trail, its rehabilitation has a high priority; as a bonus, the different problems along the trail make experimentation and demonstration of a variety of trail surfaces and construction techniques possible and a logical extension of the interpretive program.

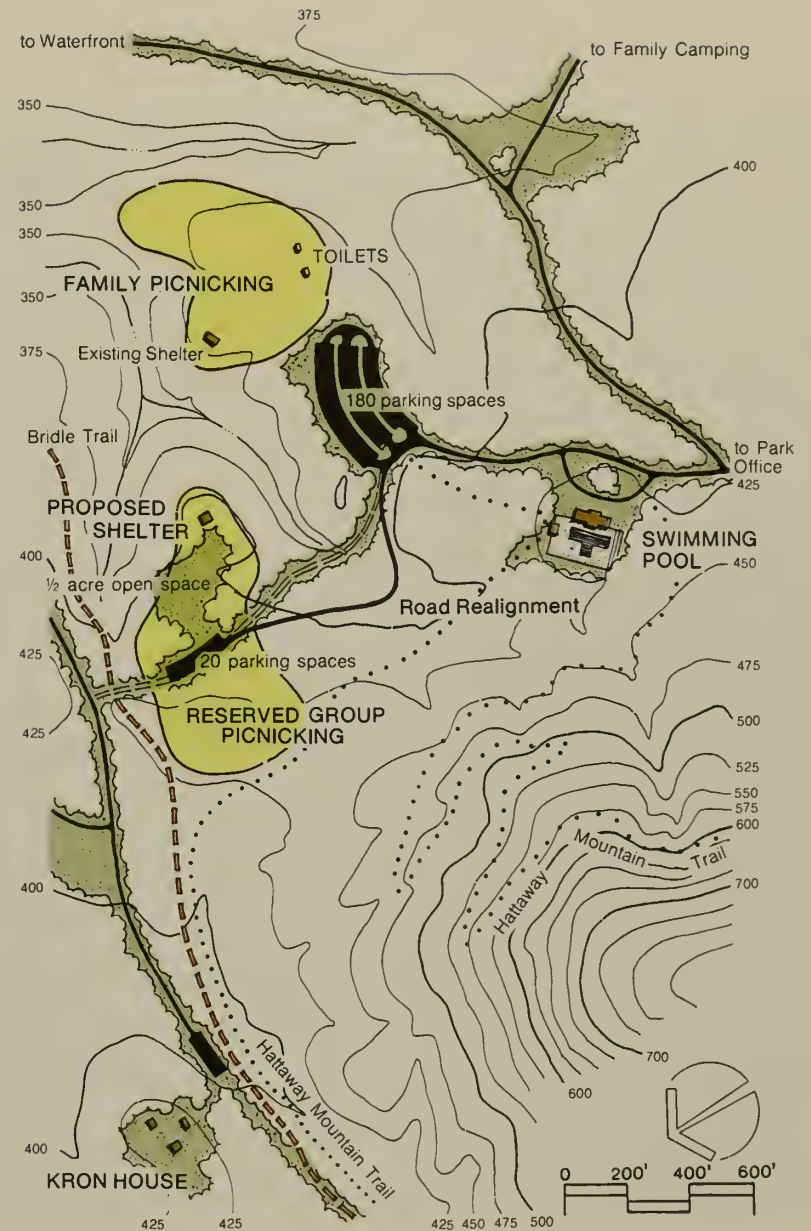
The increase in facilities and the associated increase in use in the area around the Lodge and Museum will create demand for

some additional recreation activities. Anticipating the increased demand, about 20 picnic tables will be brought in for those using the interpretive facilities, and open play space about one acre in size will be provided nearby.

#### Picnic Area

The main picnic area, located just beyond the swimming pool and parking lot, currently contains 82 picnic tables (not including those in the shelter) spread out on about five acres of woodland. This is a density of over 16 tables per acre, or about twice the recommended level in a State Park. In addition, the land is exhibiting the effects of overcrowding and compaction, and no additional land is available nearby for expansion.

In order to correct these problems and allow the land to recover, several smaller picnic areas will be established in the other use areas, and the number of tables in the main picnicking area will be reduced. Family picnicking sites will be placed in both the waterfront area and the lodge area; a new group picnicking area will be established, and the existing picnic area at the top of Morrow Mountain will be reworked. The actual number of available picnic tables in the park will not be affected, but the



SITE PLAN FOR MAIN PICNIC AREA



concentration of tables will be reduced in areas which cannot stand high-intensity use.

Most of the picnicking in the reworked areas will be for family use, but the capability will also exist for providing group picnicking. The overflow camping area adjacent to the main picnic area will be designated for group use by reservation.

The current overflow camping area is a well-drained site with an attractive open appearance, and was apparently a homesite at one time. The advantages of this site for group use include proximity to the swimming pool, existing access from the main parking area, and separation from the existing family picnicking facilities. A 150-person picnic shelter with 25 tables and all conveniences will be built on the site, and the level, 5-acre open space nearby will be maintained as open space available to the groups for informal use. The current access road is satisfactory, but an improved alignment and road surface will be considered when demand and increased use make roadwork necessary.

The existing trails close to the main picnic area are also in need of some repair and realignment. The Hattaway mountain trail currently begins at the swimming pool and follows the water supply line straight up the side of the mountain to the water reservoir. From this point on around the mountain the trail follows the road built in order to construct the reservoir and is easily negotiable, but the section from the pool to the reservoir is much too steep and uninteresting. This section will be realigned to work its way up the mountain along the side slopes, making the hike much easier as well as helping to correct the erosion problems occurring along the existing steep trail alignment.

The Quarry Trail, circling from the picnic area to the valley containing the old slate quarry and back to the main picnic area, needs some maintenance but is in fairly good shape. However, the main trail leading from the parking area through the picnic area to the Quarry Trail needs to be more clearly defined and visible to the park users. This trail will be renovated by correcting some of the steeper slopes with realignment of the trail or construction of steps, improving the actual trail surface, and defining the trail with a more comprehensive sign system.

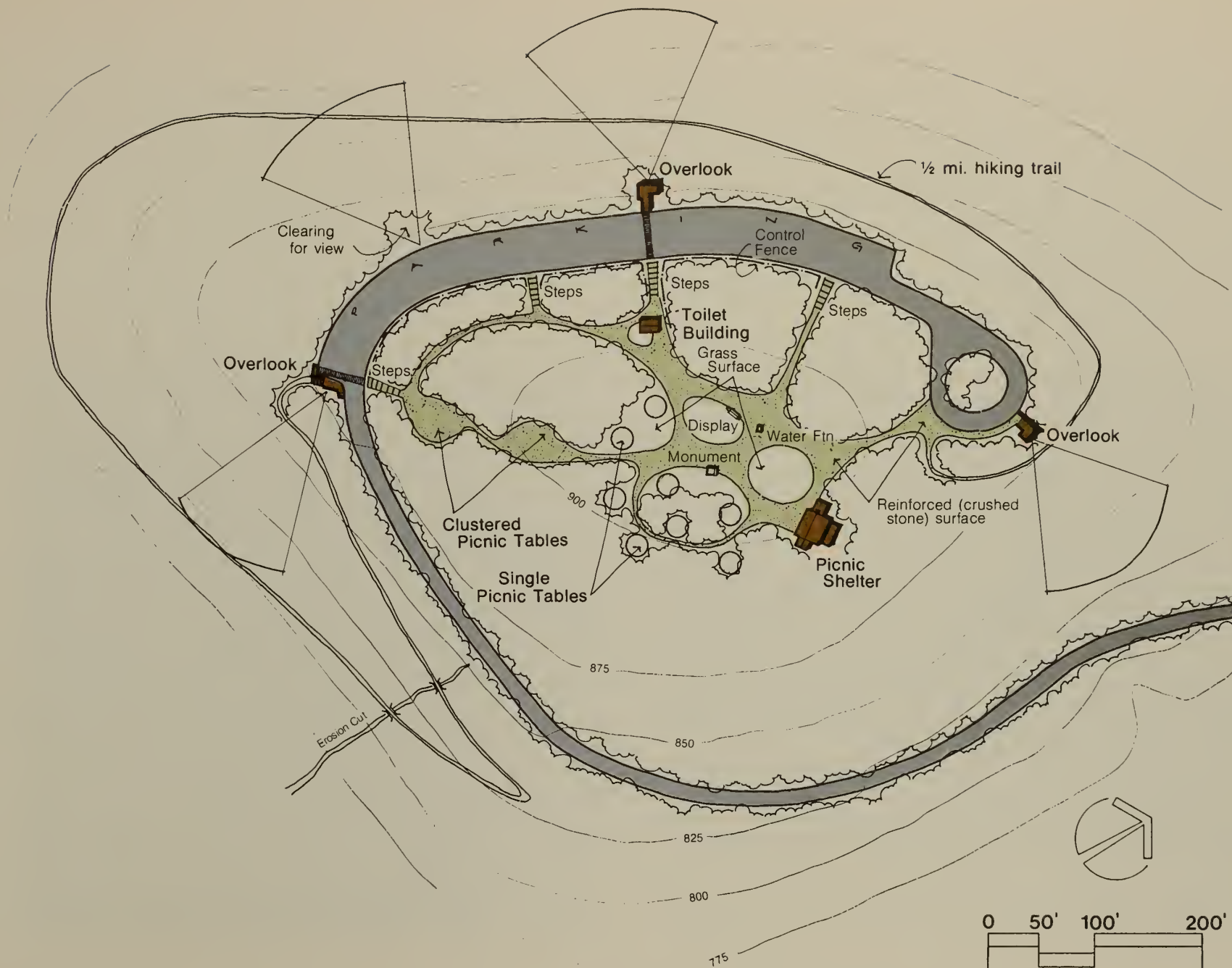
## Rehabilitation of the Morrow Mountain Scenic Area

Extensive improvements will be made at the scenic area on the top of Morrow Mountain, including improvements of the overlooks from the parking lot, rehabilitation of the ground surface, designation of picnic facilities, and provision of a self-guided trail. Most important, however, the pedestrian circulation pattern on the mountaintop will be redesigned for proper flow and containment. The lack of designated walking surfaces and inability to protect wooded areas are the principal problems at this site.

The approach road and parking area nearly circumscribe the



VISTAS FROM MORROW MOUNTAIN



SITE PLAN FOR MORROW MOUNTAIN SCENIC AREA

top of Morrow Mountain. Presently, visitors approach the mountaintop from all points around the parking lot with a badly worn path passing by the toilet building. Four sets of timber steps will be constructed at intervals along the parking area with split-rail control fencing preventing traffic up the slopes except from these points. At the top of the steps, a pathway system will interconnect existing facilities—the picnic shelter, toilet building, monument and display area, and other picnic sites. Visitors are naturally drawn to the top of the mountain and this area has become badly compacted, with a number of dead or dying trees. Despite the fact that this site contains only a water fountain and a small monument commemorating J. M. Morrow, it is a central gathering place by virtue of its elevation. The site plan proposes the maintenance of this central space but does not encourage greater use. The walking surface will be reinforced with crushed stone inside a timber edging. The areas of the open space which are not specific pathways will be maintained in grass. Twenty of the thirty-four existing picnic tables will be removed; two different sites will be provided for grouping three tables at each, eight single table sites will be clustered at the edge of the central space, and the picnic shelter and tables will remain in their existing location. This reduction of density at the mountaintop will enable restoration of the area.

Extensive study of the potential for improving the vistas from the mountaintop emphasized that the existing overlooks should

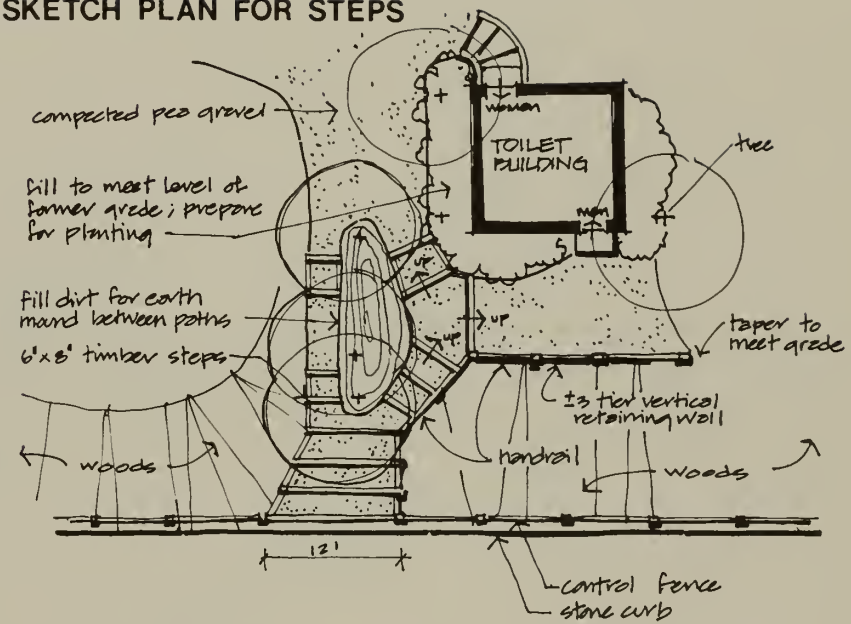
be maintained and used to their greatest advantage. Enabling visitors to get beyond the edge of the mountaintop vegetation will dramatically improve available vistas because the view will not be diffused or obstructed by adjacent trees. Study of alternatives showed that an observation deck should be built at each of the three existing overlook spots. These platforms will extend beyond the edge of the parking lot for varying lengths, up to 40 feet at the circle. Generally, they will be elevated about 20 feet off the ground at the highest point but will be level with the ground at the parking lot. The platform structures will be constructed of heavy timber with posts set on short concrete piles or telephone poles driven into the ground. The viewing decks will have about 15 feet of frontage, contained by a wooden handrail, and will be connected to the pathway system by designated crosswalk.

This pathway system will be expanded to include a self-guided trail which will almost circle the mountaintop, giving the hikers a good 1/2-mile trip through some of the different vegetation communities around the mountain. The trail will begin close to the existing turnaround at the end of the parking lot, and guide the hiker around the western and southern sides of the mountain before completing the loop by connecting to the pathway system at the southern end of the parking lot. An entirely new trail segment will be constructed to continue on around and down the eastern side of Morrow Mountain and join the Sugarloaf Trail after about 1.4 miles of some of the best scenery in the park.

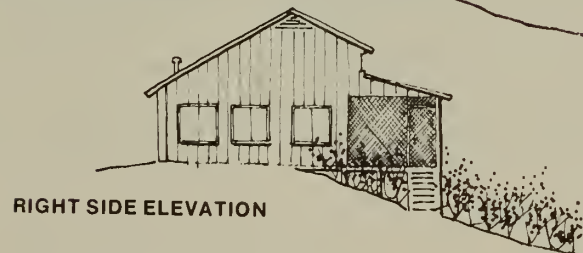
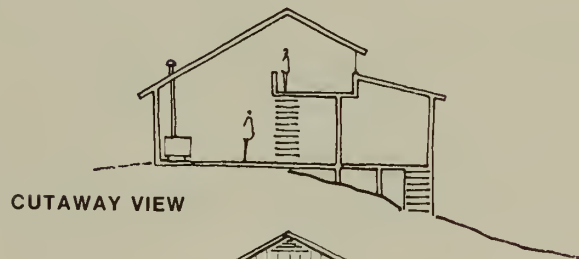
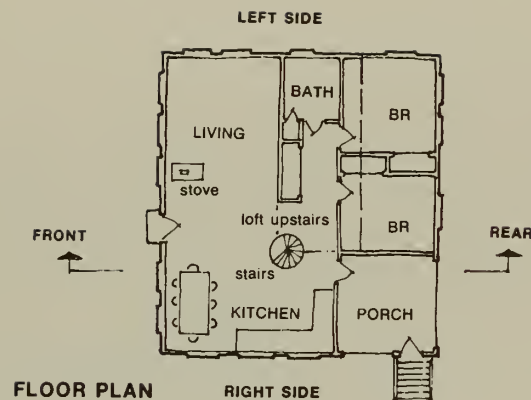




# SKETCH PLAN FOR STEPS



P A R K I N G



**THREE-BEDROOM CABIN**

### Family Vacation Cabins

Construction of a new family vacation cabin area is the most extensive proposal for new development at Morrow Mountain State Park. The site chosen is located on rolling to steep terrain on the east side of Fall Mountain, between the Kron House and Lake Tillery. This area is appropriate because it is a quiet, somewhat isolated part of the park, containing extensive hardwood forest and diverse topography. It has high scenic value, is amenable for construction of a low-speed park road, and has a number of good building sites for cabins.

The access road will extend north from the Kron road for almost 3,300 feet, crossing one creek and terminating about 600 feet short of Lake Tillery. This road will be paved and be a maximum 20 feet wide. The cabins will be served by a series of T-intersections, maximizing privacy for cabin occupants. The cabins are designed in three basic clusters of seven to ten units, with a total of 27 units proposed. While the main road stem will be paved, the short access spurs will probably be gravel. The complete road system will total about 1.2 miles.

The cabins will be designed to blend with regional historic architecture, and will have floor plans varied enough to provide for up to three bedrooms. Covered porches will be a standard feature on all cabins. The buildings will be winterized, and will include fireplaces with stone chimneys or wood-burning stoves. Nitrification fields for sewage disposal will be incorporated as part of the open space plan visible from the roadside.

When the first stage of family cabins is completed near Fall Mountain, the existing cabins will be converted to group use. Because of the proximity to the interpretive center the cabin facilities will be rented exclusively to groups having environmental education themes. The cabin colony will remain available on a rental basis, therefore, to environmental education groups instead of the general public.



SITE PLAN FOR PROPOSED FAMILY CABIN COLONY



### Tent and Trailer Camping Area

The three camping loops provide 106 designated campsites. During the peak season all three loops are fully occupied during the weekend. Nevertheless, demand for camping sites has probably peaked, leaving little justification for expansion of these facilities. Instead, the critical need is for rehabilitation of all three areas, especially "B Loop".

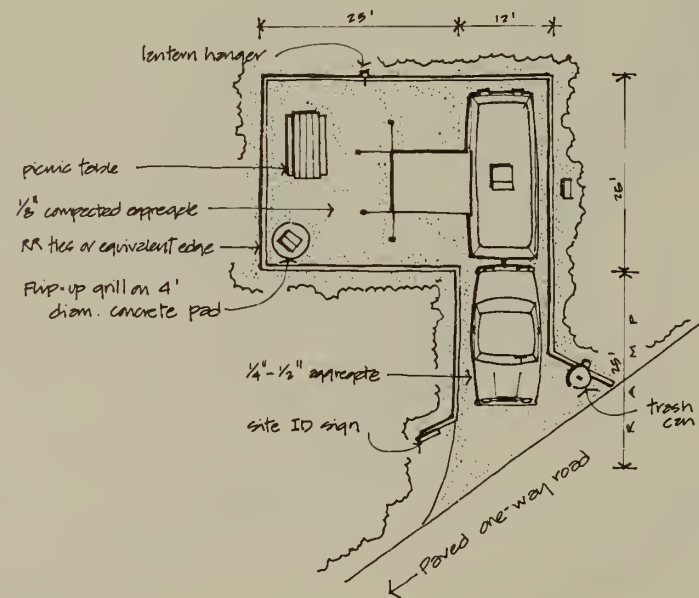
Rehabilitation of the camping areas, however, does not simply mean a revitalization of the ground surface and protection of affected vegetation. In a majority of circumstances sites were poorly laid out in the first place and need to be corrected. In many instances, vehicles pads are 90° to the loop road or otherwise difficult to approach; the site elements, such as tent pads, picnic tables, grills, and trash cans are improperly located.

A well designed campsite consists of the following items:

- a back-in gravel drive (preferable less than 90° to the loop road) which terminates in a level pad suitable to park a motor home or travel trailer.
- an activity pad at least 25' X 25' and surfaced with fine gravel on the door side of trailers.
- a heavy timber border enclosing both drive and activity area.
- picnic table, grill, and tent pad area located in the designated activity area.
- trash can located at the edge of the loop road, adjacent to the gravel drive and inside the timber border.

A principle problem with the existing campsites is the tendency for users to expand the sites over time. This is done simply

by seeking "greener grass" on which to situate a tent or relocate the picnic table. Considering the condition of some of the sites and pads, users cannot be faulted for this activity. The result of this tendency, however, is for the fringe areas around the designated sites to become impacted to the extent that, in some cases, adjacent sites run together.



TYPICAL CAMPSITE PLAN



The solution to this problem is: define the campsite boundary explicitly and the tendency to alter the space will be reduced. This campsite definition is accomplished with the previously mentioned timber border along the actual edge of the site. Given a visual clue to the intended parameters of the site, users are likely to respect the boundary. Naturally, the campsite must be well maintained for this technique to succeed. Defining and limiting the area of the campsite will enable the park staff to establish and maintain vegetation at the immediate edge of the site, providing greater protection for the surroundings and giving the campsites greater privacy.

A new facility to be provided at the campground is a contact station specifically for the purpose of informing campers of park policies on fee collection, site selection, duration of stay, as well as schedules for regular park programs. The contact station will be located on the right side of the road entering the camping area, and consists of a single pull-off lane close enough to the information display that the driver will not be required to leave his vehicle. In order to fulfill all these criteria, the contact station will be built directly opposite the camping area dump-station. This location is close enough to the entrance to the camping area to give campers all the information they need quickly, and will also enable them to easily turn around using the dump-station loop if necessary.

In addition to campsite redesign and information station construction, the washhouse in Loop B and its surroundings need renovation. The long period of use of this loop has had its effect on the entire area; the ground had been compacted and vegetation damage has resulted. The dead and dying trees will be removed, the ground will be aerated, topsoil will be brought in,

and understory vegetation will be reestablished between the renovated campsites.

### **Waterfront Area**

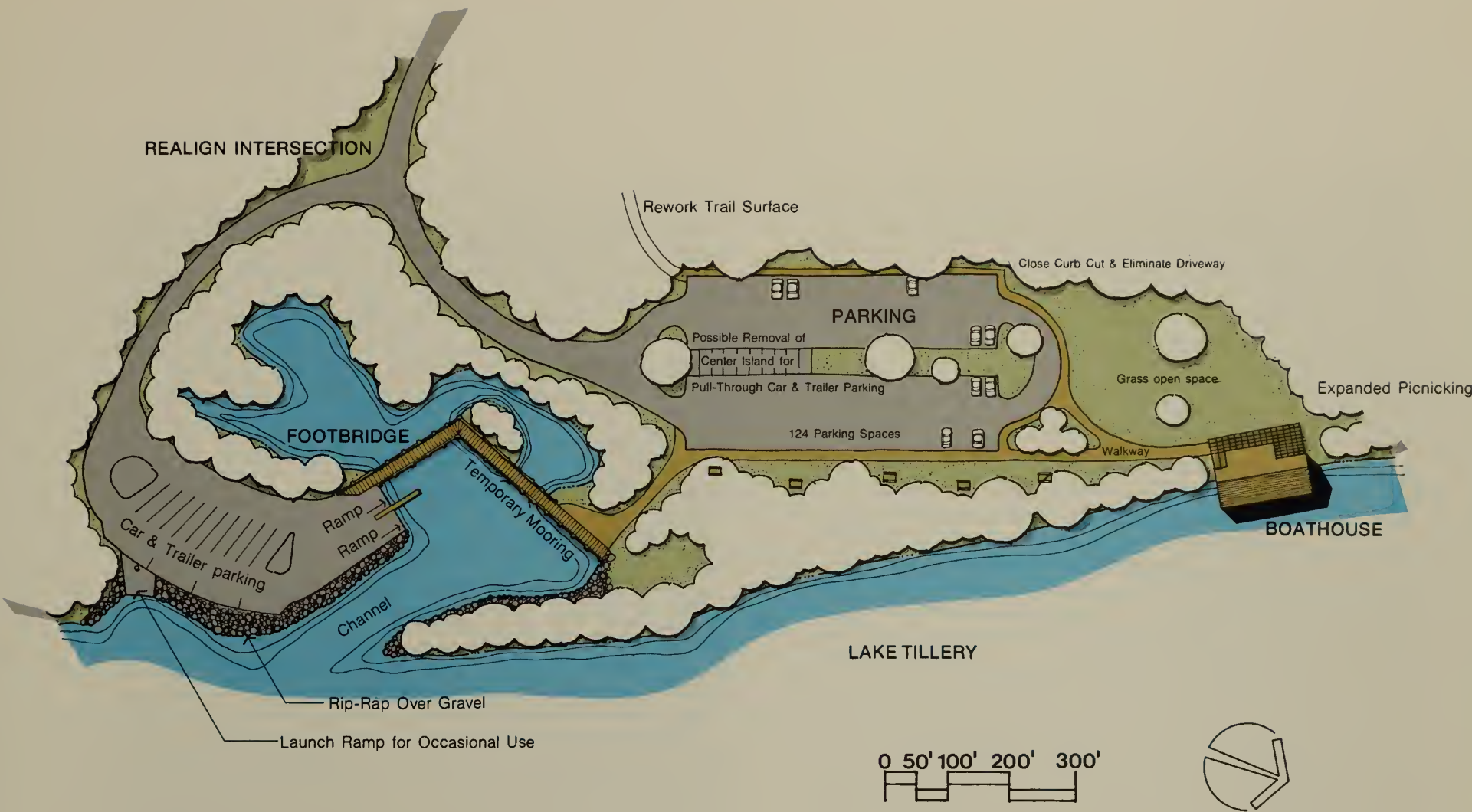
The water-related recreation facilities are located at the terminus of the main park road, where it descends from the higher terrain into the floodplain along Lake Tillery. These facilities consist of a 125-car parking lot associated with a boathouse, and two boat ramps. The boat ramps are located at the end of the main park road in an informal parking area, and the boathouse and related parking are located on a spur off the main road. Separating the two is a small inlet with a narrow channel into which one boat ramp feeds. The other ramp extends directly into Lake Tillery.

There are several problems associated with the boat launching area. Lack of organized parking causes heavy congestion during heavy-use periods. The separation of the two ramps compounds this problem. Generally, visitors park along the perimeter of the paved area and, when this area fills, they park along the verge of the approach road.

The waterfront in the launch area needs extensive treatment to restore a stable and attractive lake edge. Fill dirt will be brought into the site and spread over the eroded spots. In other places, the existing ground surface will be reshaped to create a uniform slope into the lake. Several inches of gravel will be compacted onto the ground surface as a base for larger rip-rap size stone which will be the finished cover for the bank.

The large parking lot associated with the boathouse is not used to capacity, seldom even being half-filled. The boathouse





SITE PLAN FOR WATERFRONT DEVELOPMENT

provides only rowboat rentals during the summer season and the only other facilities provided are toilets. Overall, the waterfront area as it exists is not heavily used; it is hot and humid in the summer, with no designated places to sit or picnic, few useful shade trees and not even a drinking fountain. The lake does not provide the cooling effect one would expect and the area is surrounded by low-lying ground which enhances the insect population.

In order to alleviate the problem of underuse, some extensive changes in layout need to be made and additional facilities provided. Most important is the provision of a pedestrian footbridge, between the main parking and boat launch areas. The footbridge, a boardwalk across the inlet, will provide reasonable walking distance between the two facilities so that the main parking lot may supplement parking for the boat ramps. Additionally, it will serve as temporary mooring for boats, a fishing platform into the lagoon opposite the boat channel, and as an observation platform. Installation of the boardwalk will be in conjunction with other improvements at the boat launch, all of which will be designed for handicapped access. Fifteen designated parking spaces will be provided for pull-through car and trailer use. Two parallel ramps replacing the lakefront boat ramp will be developed adjacent to the boardwalk for access into the lake inlet.

Realignment of the main park road will provide direct access to the main parking area instead of the launching area. Walkways will provide designated pedestrian circulation from the parking lot to the boathouse and boardwalk. Twenty family picnic tables will be located on the high ground immediately upstream from the boathouse. Boathouse storage for six canoes will encourage canoeing as an additional activity. Additionally, the boathouse will be provided with a lattice-type sunscreen along its entire front

face, since this area is unshaded and becomes very hot on summer days. A sitting area with tables will be incorporated into the shaded area and a small snack or concession stand will be provided in the boathouse. Drinking fountains will be provided close to the heavier use areas around the waterfront. These measures will encourage and support increased use of this area.

#### **The Kron House**

The restored Dr. Francis J. Kron House, related buildings, and grounds are a landmark at Morrow Mountain and unique to the State Park System. Aside from their historical significance they are the most substantial part of the park's interpretive program. The restoration and grounds are attractive, incorporating a number of important landscape elements, including a hilltop location, cluster of buildings, fruit, nut, and cedar trees, and the family graveyard.

Because the park's interpretive program is minimally developed, the Kron House has been an entity unto itself. In the future, when the lodge is converted to an Interpretive Center, the Kron House will be a logical part of an overall program. At the lodge, the visitor will be oriented to regional history and growth of the community in and around the park. The town of Tindalesville, Lowder's Ferry, The Tavern, Stoney Hill Church, the development of the road system, and many homesites will be portrayed. The conditions imposed on the settlers and how they used the landscape will be shown with regard to the importance of the river, available land, and the mountains. The Kron House can be used as a landmark for the visitor during this part of the program and after he has left the lodge.

Once the visitor has viewed the general program at the inter-



pretive center, he would visit the Kron House restoration. From there, he could choose from three loop trails ranging up to 1-1/2 miles in length, and gain first hand knowledge of the old building sites and roadways. Several specific recommendations are made with respect to the Kron House area:

- The parking lot catches a great deal of debris washed from the hillside. It should be swept regularly. More crushed gravel is needed on the pathways.
- The directional sign at the top of the steps reading TRAIL is misleading and should read PARKING.
- The old access road from the parking lot to the house is eroding and requires treatment. The pathway to the cemetery should be repaired and small footbridge at the bottom of the hill is needed.
- Document and remove the existing gravestones from the cemetery until visibility and park control are improved. Define the edge of the cemetery, encourage the growth of ivy and periwinkle across the gravesite. Provide a sitting place on the trail side of the cemetery.
- A legitimate trail link should exist between the Kron House and the Fall Mountain Trail.

The 1967 session of the N. C. General Assembly appropriated \$9,000 to erect a chain-link fence around the entire site of the Kron House, cemetery, and parking lot. The specific purpose of the fence was to protect the site from further vandalism. The fence, about 3,000 feet in length and 10 feet high, was installed in March, 1968.

This planning study has determined that the fence is not



serving the purpose for which it was intended. There are sizeable gaps between its bottom and the ground, through which anyone could crawl; as a result, the gate is left open at all times. It is doubtful that the fence deters intruders, except for the deer.

As indicated previously, one of the main proposals is to link the Kron area to related trails. In order to do this, the fence will either be removed altogether (and used where it is needed) or additional gates will be provided which will enable direct trail linkage.

Since the continual problem of vandalism appears not to be a nocturnal one, locking the gate at night is not a solution. Instead, what may be important is to provide more staff located at the Kron site on a more regular, permanent basis. The possibility of using this staff to actively portray life at the Kron House, possibly through a "living farm", will be considered in developing the overall park interpretive program.

### **Primitive Camping**

The area presently set aside for reserved Group Primitive Camping will be maintained. Two additional sites, providing accommodations for 25 and 10 persons respectively will be added to the five existing sites. The total capacity of this facility will be 160 people over seven sites. Some work needs to be done to improve the condition of existing sites. Parking areas particularly need definition to control undesirable traffic.

A Family Primitive Camp for hikers will be established at the edge of the designated Natural Area immediately west of Tater Top Mountain. It will occupy a long narrow ridge, bounded by clear-running streams. The camping area will consist of twelve

sites with two pit toilets and will be accessible from the new trail connecting the park office and Morrow Mountain. Campers will park at the office and hike to the site, about one mile.

### **Park Natural Area**

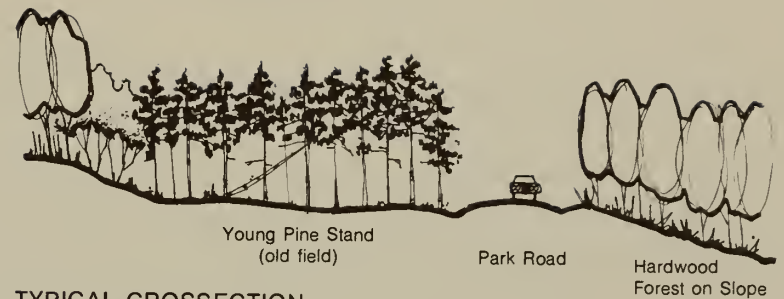
A park natural area, consisting of approximately 1,400 acres located in the southern portion of the park, is included as a component of the master plan. Studies conducted in 1976 and during the course of the current planning process suggest that the land area bordering Mountain Creek and surrounding Morrow Mountain is especially worthy of natural area designation. Tater Top Mountain and about one mile of Lake Tillery's shoreline are included in this natural area proposal. This area will be classified as a state park natural area, but could later be designated a State Natural Area. As noted in the earlier study, all stable plant communities, active floodplain, and representative geologic features present in the park exist within this one area.

The primary purpose of the park natural area designation is to establish specific areas as permanent nature preserves. However, certain recreation uses, such as hiking and bridle trails, are acceptable within these designated park natural areas; in this particular instance small-scale primitive camping areas are sited close by due to the proximity of existing service and fire roads, and the desire to provide as much of a wilderness camping experience as possible in the park. It must be remembered that, if this 1,400-acre tract is ever designated a State Natural Area and enlarged, the primitive camping facilities would be entirely removed in order to meet the requisite criteria.

### Selected Field Clearing

In an effort to provide greater diversity in the park landscape, selected sites will be cleared of existing vegetation and managed as open fields. Specifically, pure pine forests less than thirty years old and located directly adjacent to park roads will be considered for clearing. The purpose of this is threefold: to reduce the forest monoculture most subject to pine bark beetle infestation, to provide areas deliberately managed for deer browse which will be easily visible to park visitors, and to increase visual interest by creating openings in the presently uniform forest enclosure. Little will be lost by carrying out this proposal; the young pine forests are unproductive for wildlife habitat and are low in general environmental quality.

Along the road leading to the Kron House old fields adjoin the roadway in several places. These areas are best suited for the clearing proposal since the roadway is the least travelled in the park and would prove effective for observing wildlife from a car. Care will be taken to avoid soil erosion by clearing during a dry period and by preparing and planting native field covers common to old field succession as quickly as possible. Clearings are designed to be visible from the roadway and to provide depth and diversity within the open space itself. Eastern red cedar will be allowed to remain in these open areas, and perhaps cedar or hawthorne hedgerows could develop. Groves of fruit trees could also be an asset to the area.



TYPICAL CROSSECTION



PROPOSED CROSSECTION



PROPOSED CROSSECTION

### SELECTED FIELD CLEARINGS

# Summary of Development Phasing

Phase One	Approximate 1979 Costs
1 — Morrow Mountain Scenic Area — redevelopment of walkways, steps, construction of overlooks, and self-guided trail.	\$ 35,000
2 — Waterfront — redevelopment of shoreline, boat ramps, parking, and boardwalk.	60,000
3 — Tent and Trailer Camping Area — build information station, rehabilitate Loop B.	5,000
4 — Kron House — improvements to cemetery trail.	1,000
5 — Trails — renovate Sugarloaf Trail, Hattaway Trail, and Laurel Trail.	4,000
6 — Lodge/Museum Area — convert lodge to Interpretive and Administrative Center.	<u>150,000</u>
Total Phase One	\$255,000

## Phase Two

7 — Waterfront — improvements to boathouse, provision of canoe rentals, and new picnic areas.	\$ 8,000
8 — Lodge/Museum Area — improvements to open space, new picnic area, and trails. Convert museum to specialized facility.	20,000
9 — Main Picnic Area — conduct extensive rehabilitation of sites and facilities.	8,000
10 — Main Picnic Area — construction of shelter and designation of group area.	30,000
11 — Tent and Trailer Camping Area — rehabilitate Loops C and A.	10,000
12 — New Family Cabins — construct first stage.	500,000
13 — Trails — construct Morrow Mountain long-distance trail.	5,000

14 — Family Primitive Camp — develop 12 sites.	<u>500</u>
Total Phase Two	\$581,500
<b>Phase Three</b>	
15 — Existing Cabins — convert to group environmental education facility.	\$ 8,000
16 — Entrance — move gate, construct exit lane, make improvement to information display, construct new dumpster access.	25,000
17 — Equestrian Area — establish new parking area, camping, relocate stables, and realign trails.	10,000
18 — New Family Cabins — construct second stage.	500,000
19 — Construct new Ranger Residence.	<u>60,000</u>
Total Phase Three	\$603,000
Combined Total	\$1,439,500





# Development Program

DAY USES		Capacity	Density	Turnover	Daily Maximum
<b>I. Interpretive Center and Offices</b>					
(converted lodge building)					
display area	1320 sq. ft.	66	20 sq. ft./person	8	528
lab and naturalist's office	1184 sq. ft.				
reception and toilets	1296 sq. ft.	22			
main lodge room	2880 sq. ft.	200 (full seating)	14 sq. ft./person		
administrative offices	910 sq. ft.				
storage	180 sq. ft.				
Specialized Exhibit Building					
(converted museum)					
		35	25 sq. ft./person	8	280
Parking spaces		66 existing (2 buses)			
Picnicking area		80	8 tables/acre 20 tables total	2	160
<b>II. Swimming Pool</b>					
		350		2	700
bathhouse					
pool, deck, and observation area					
concession building					
parking spaces		250 existing (4 buses)			
<b>III. Family Picnic area</b>					
shelter (existing) with 10 tables		60		2	120
general picnicking — 40 tables		160	8 tables/acre	2	320
open space — 1 acre at lodge					
parking spaces		as above			
<b>IV. Group Picnic Area</b>					
shelter with 12 tables (800 sq. ft.)		80		2	160
toilet building					
open space — 1 acre existing					
parking spaces		20 (2 buses)			
<b>V. Morrow Mountain Scenic Area</b>					
shelter (existing) with 4 tables		24		2	48
general picnicking — 14 tables		56	8 tables/acre	2	112
toilet building					
3 scenic overlooks		20 each			
parking spaces		24 existing (2 buses)			

		Capacity	Density	Turnover	Daily Maximum
<b>VI. Waterfront Area</b>					
330' footbridge		30		6	180
2 boat ramps		2		25 per lane	50
car/trailer parking spaces		15		1	15
boathouse (existing)					
10 rowboats (existing)		30		8	240
6 canoes		12		8	96
20 picnic tables		80	8 tables/acre	2	160
parking spaces		124 existing (2 buses)			
<b>VII. The Kron House</b>					
building complex and grounds		75		8	600
parking spaces		30 existing (2 buses)			
<b>VIII. Interpretive Trails</b>					
Laurel Demonstration Trail	.53 miles	32	60 per mile	6	192
Lodge Trail	.61	18	30 per mile		108
Morrow Mountain Trail	.48	14	"		84
Quarry Trail	.45	14	"		84
Three Rivers Trail	.65	20	"		120
Kron-Lowder's Ferry Trails					
loop 1	.46	14	"		84
loop 2	1.19	36	"		216
loop 3	1.77	53	"		318
<b>IX. Long Distance Trails</b>					
2 contact stations					
pit-type toilet					
stable (existing)					
bridle trail car/trailer parking		15 existing			
hiking trail parking		10			
existing hiking trail	8.60 miles				
proposed hiking trail	5.20 miles				
total	13.90 miles	209	15 per mile	1.7	355
existing bridle trail	10.62 miles				
proposed bridle trail	12.42 miles				
total	23.04 miles	69	3 per mile	1.7	117
trail to be renovated	1.93 miles				
trail to be removed	.85 miles				

OVERNIGHT USES		Capacity	Density	Turnover	Daily Maximum
<b>I. Family Vacation Cabins</b>					
27 cabins		162	6 per cabin	1	162
access roads and drives	1.27 miles				
<b>II. Family Tent &amp; Trailer Camping</b>			sites/gross acre		
Loop A — 36 sites, 15.6 acres		144	2.3	1	144
washhouse (existing)					
Loop B — 31 sites, 6.9 acres		124	4.5	1	124
washhouse (existing)					
Loop C — 38 sites, 11.8 acres		152	3.2	1	152
washhouse (existing)					
bridle trail camping — 20 sites		80	4.0	1	80
<b>III. Family Primitive Camp</b>					
3 clusters of 4 sites, 12 acres		48	1.0	1	48
<b>IV. Group Cabins (converted)</b>					
6 cabins		36	6 per cabin	1	36
parking		16			
<b>V. Group Primitive Camp</b>			sites/gross acre		
5 sites (existing)		90	.80	1	90
2 sites		35	3.0 max.	1	35
parking spaces		35			
SERVICE FACILITIES		Capacity	Density	Turnover	Daily Maximum
<b>I. Park Office (existing)</b>					
parking spaces		8 existing			
<b>II. Maintenance Area (existing)</b>					
shop building					
maintenance warehouse					
storage building					
<b>III. Information Station</b>		12		30	360
parking		8 existing (8 buses)			
<b>IV. Residence Area</b>					
3 existing					
1 proposed					
personnel barracks					





### **Land Acquisition**

It is proposed that agreements insuring resource conservation, scenic protection, and public trail access for a total of 618 acres be made in conjunction with the implementation of this master plan. Of this, only 31 acres must be acquired outright. The balance of land may be acquired with a less than fee simple arrangement, depending on the objectives of the State and private owner.

Highest priority for land acquisition is a 26-acre parcel commonly known as the Whitley tract. It is almost completely surrounded by parkland, and its prompt acquisition would insure the integrity of the park boundary. The other tract to be acquired outright is a five-acre triangular-shaped piece adjoining the Alcoa property on the north boundary of the park. The back road to Badin runs through this tract, and acquisition would better define the park boundary and allow improved access control.

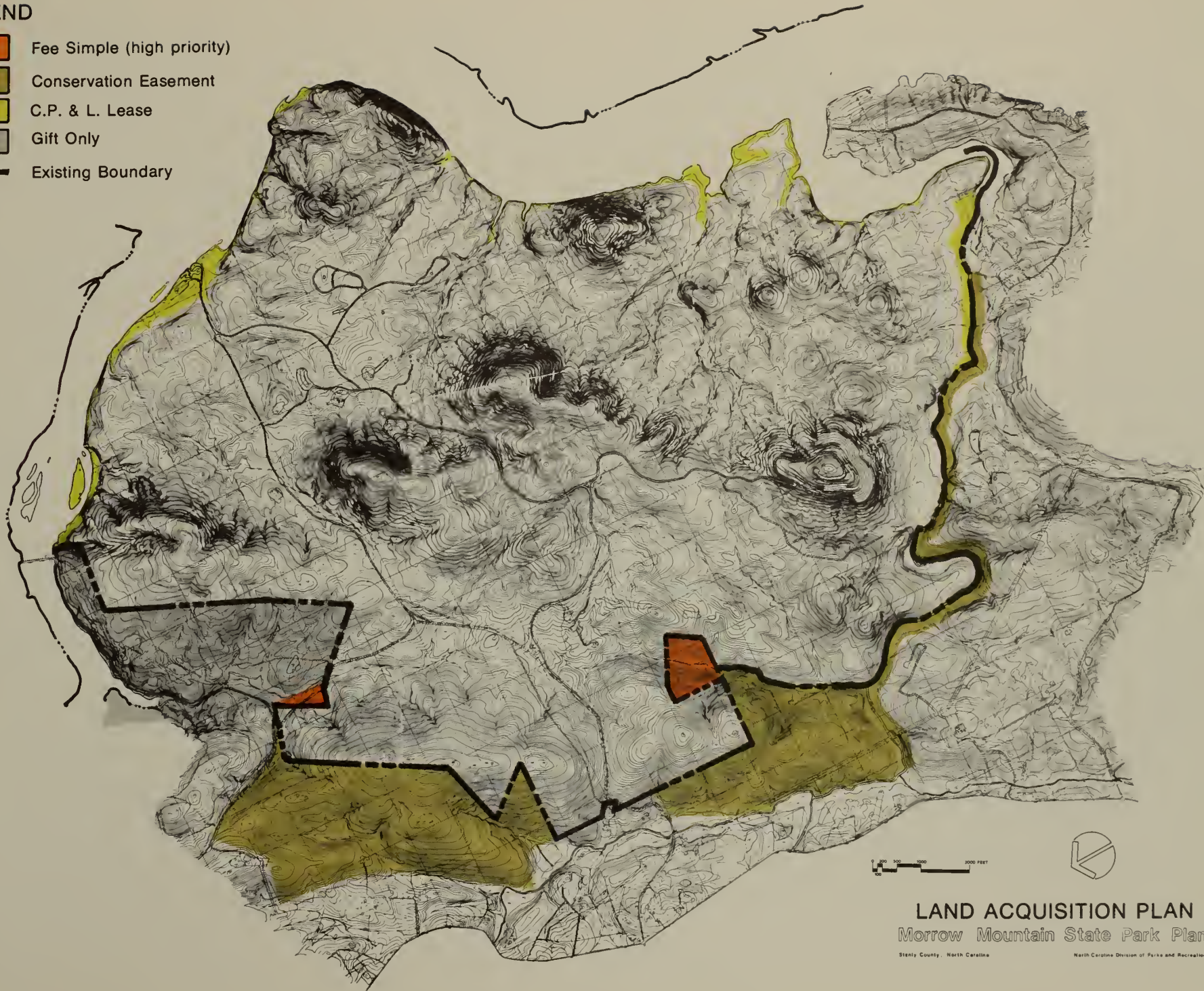
An agreement from adjacent private owners along 2.5 miles of the south boundary of Mountain Creek would aid in the protection of this area. The agreement would gain both scenic and resource conservation for a 200-foot setback along the creek and would total approximately 58 acres. Trail access is not a necessary component of this agreement.

The land acquisition proposal includes two mountain forest tracts involving 225 acres and 304 acres respectively. Both are located along the western border of the park, on opposite sides of the park access road. Agreements allowing public trail access and insuring the integrity of the forest and steep slopes are desired on both of these tracts.



# LEGEND

- Fee Simple (high priority)
- Conservation Easement
- C.P. & L. Lease
- Gift Only
- Existing Boundary



## LAND ACQUISITION PLAN Morrow Mountain State Park Plan

Steilly County, North Carolina

North Carolina Division of Parks and Recreation

## BIBLIOGRAPHY

Burney, David A.; "A Summary of the Natural History of Morrow Mountain State Park," N. C. Division of Parks and Recreation, January, 1976. (Unpublished Report)

—; "Resource Management Recommendations for Morrow Mountain State Park," N. C. Division of Parks and Recreation, January, 1976. (Unpublished Report)

Conley, James F.; "Geology of the Albemarle Quadrangle, N. C.," N. C. Division of Mineral Resources, Bulletin 75, Raleigh, 1962.

Cooper, Peter P., II, and Spicer, Simon R. H., Research Assistant; "Historic and Prehistoric Archaeological Resources" Survey of a portion of Morrow Mountain State Park, Stanly County N. C., "Museum of Anthropology Catawba College, Salisbury, N. C., May, 1977.

Morgan, Judy Tate; "A Vascular Flora of Morrow Mountain State Park, Stanly County, N. C.," thesis, University of North Carolina, Chapel Hill, Department of Botany, 1962.

Morse, Thomas W.; "Master Plan Report for Morrow Mountain State Park," N. C. Forest Service, 1937.

North Carolina Department of Administration, Office of State Planning, Demographic Research Branch, "Population Estimates for North Carolina Counties and Municipalities"; 1977.

North Carolina Department of Conservation and Development, Division of State Parks; "Principles Governing the Establishment, Extension, and Development of the State Park System of the State of North Carolina"; August, 1965.

North Carolina Department of Conservation and Development, North Carolina Recreation Commission; "A Method for Determining the Annual Carrying Capacity for Selected Types of Outdoor Recreation and Facilities in North Carolina"; February, 1968. (Unpublished Report)

North Carolina Department of Natural Resources and Community Development, Division of Parks and Recreation, Official Files.

North Carolina Office of Recreation Resources; "Summary Statewide Comprehensive Outdoor Recreation Plan for North Carolina"; Raleigh, 1973.





## ACKNOWLEDGMENTS

### Planning Team:

Bradley W. Davis, Landscape Architect  
Stanley N. Williams, Landscape Architect  
Carolyn Van Hoy, Drafting Technician

### Supervisors:

Alan R. Eakes, Chief of Planning  
Frederick P. Hagenberger, Landscape Architect

### Acknowledgements:

James S. Stevens, Jr., Director  
Samuel J. Thomasson, Assistant Director  
William A. Webster, Superintendent of State Parks  
H. Scott Bolin, Natural Science Museums Curator  
David A. Burney, former Regional Naturalist  
Lance Peacock, Natural Heritage Inventory Specialist  
John B. Taggart, Environmental Research Specialist  
Maggie McNeill, Clerk Typist III  
Jim Page, NR&CD Photographer

### Special thanks to Morrow Mountain Staff:

Joe R. Franklin, Superintendent II  
Jody A. Merritt, Park Ranger II  
James O. Billings, Park Ranger II  
Jason B. Smith, Park Ranger II  
Lynn Harrington, Clerk-Typist  
Morrow Mountain State Park  
Rt. 2, Box 204  
Albemarle, NC 28001  
Telephone: (704) 982-4402

